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ABSTRACT

These two papers are products of the Mount Druitt Early Childhood Project, a project established to develop, implement and evaluate five different early childhood programs for disadvantaged children in a suburban area of Sydney, Australia. The programs enrolled children from preschool age through kindergarten and first grade. The first document describes and evaluates the preschool curriculum components of one of the five programs. The second continues the program's curricular descriptions for the subsequent two years. The teaching strategies and learning content are said to be based on behaviorist early childhood programs developed in the U.S.A. during the 1970s. Program objectives for children, their teachers and parents are specified. Social reinforcement techniques, especially descriptive praise statements, and their implementation are indicated. Evaluation results suggest that the preschool program was successful in developing language competency and task mastery as well as promoting prosocial behavior. Mastery of terminal tasks was generally achieved by kindergarten students in the areas of reading, writing and number skills: and first grade students in the areas of number, reading comprehension, writing and spelling. The technique of providing descriptive praise appeared the most difficult skill for teachers to master.
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THE BEHAVIOURIST PRESCHOOL PROGRAM

J. Metham

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NUMBER 5

DATE March 1980

Preface

The Mount Druitt Early Childhood Project was established to develop, implement and evaluate five different early childhood programs for disadvantaged children in a western suburban area of Sydney. The programs commenced with preschool-aged children and continued on through the children's first two years of formal schooling.

This document describes and evaluates the preschool curriculum components of one of the five programs. A comparison document continues the program's curricular descriptions for the subsequent two years.

Described as a behaviourist program, the teaching strategies and learning content detailed in the subsequent pages are based on behaviourist early childhood programs developed in the U.S.A. during the 1970's.

John Metham, as a Program Assistant with the Project, had the specific responsibility for the development, implementation and evaluation of the program. In this endeavour he was ably assisted by Margaret Bouvet and Pat Meyers as teachers, and Irene Gallon and Carol White as teachers' aides. Both Del Kennedy and Judy Watson as Infants' Mistresses contributed immensely to the program's development.

The professionalism, enthusiasm and good humour of all made the program viable and rewarding for both children and teachers.

Professor Hugh Philp
Project Director
Mt Druitt Early Childhood Project

John Braithwaite
Field Director
Mt Druitt Early Childhood Project

The Behaviourist Preschool Program

Introduction

Over the last two decades numerous studies have applied behaviouristic learning theories to educational settings. Generally these studies are based on the application of operant conditioning theories utilising a wide range of specific reinforcements to alter the strength of preceeding responses. Bijou (1970) argues that the application of operant conditioning theories provides a set of concepts and principles derived entirely from the experimental analysis of behaviour and provides a methodology for the practical application of these concepts and principles.

Based upon the groundwork studies of Wolf, Baer and Bijou, experimental preschools based on operant conditioning studies, developed at different sites throughout the U.S.A. The knowledge gained from these earlier developments enabled the application of behaviourist concepts and principles for disadvantaged children in public school settings.

Within the early childhood area Projects Head Start and Follow Through saw the establishment of a number of behaviourist programs. Subsequent evaluation reports (Smith, 1973; Stebbins et al., 1977) provided substantial evidence concerning the effectiveness of these programs and these findings were supported by data from numerous independent studies (cf. O'Leary & O'Leary, 1977). The experiences gained in developing, implementing and evaluating these programs enabled their successful replication and adaptation in a variety of new educative situations.

The majority of behaviourist early childhood programs were designed to improve the performances of disadvantaged children in academic and language areas as these areas are considered crucial for later success in school. Across all of these programs a wide variety of reinforcement procedures were introduced ranging from social reinforcers to token economy classrooms. Bushell (1973) provides an outline of the principles followed in most early childhood programs.

1. Specify the final performance and develop a way to measure it.

2. Determine the student's current performance level.

3. Construct a favourable learning situation by (a) providing prompts for appropriate behaviour and (b) eliminating prompts for inappropriate behaviour.

4. Establish motivation by (a) identifying the students' reinforcers and (b) constructing a system for the contingent delivery of reinforcers.

5. Shape the terminal behaviour by (a) reinforcing successive approximations of the final performance and (b) gradually raising the criterion for reinforcement.

The wealth of empirical data and experiential knowledge generated in the 1970's provided the foundations for the behaviourist preschool program developed by the Project.

Program Overview

The behaviourist program implemented by the Project was based on a model developed by Bushell (1973) at the University of Kansas for Head Start and Follow Through Programs. The Mt Druitt Behaviourist program closely followed the Bushell model, but instead of a 'token economy' being established, 'social reinforcers' were utilised. This initiation was undertaken as the teachers, aides and infants mistresses could not philosophically accept the use of a token economy in the preschool setting. Thus though social reinforcers were essentially on trial at the beginning of the program subsequent data confirmed their effectiveness in the preschool setting.

The program focussed on the individual development of pre-reading, pre-writing, number and prosocial skills (See Appendix A). Formative evaluation was an integral part of the daily operation of the program as children's performances in the specified areas were continually monitored by teachers and aides. To facilitate the program's operation curricular experiences were hierarchically structured in terms of their degrees of difficulty. The teacher's task therefore, was to provide appropriate learning experiences for children so that they could master a given task before proceeding onto the next level of difficulty. Failure to successfully complete the task at a specified level of mastery resulted in the introduction of remedial tasks to enable the child to master the skill being taught. This procedure is illustrated in Figure 1 .

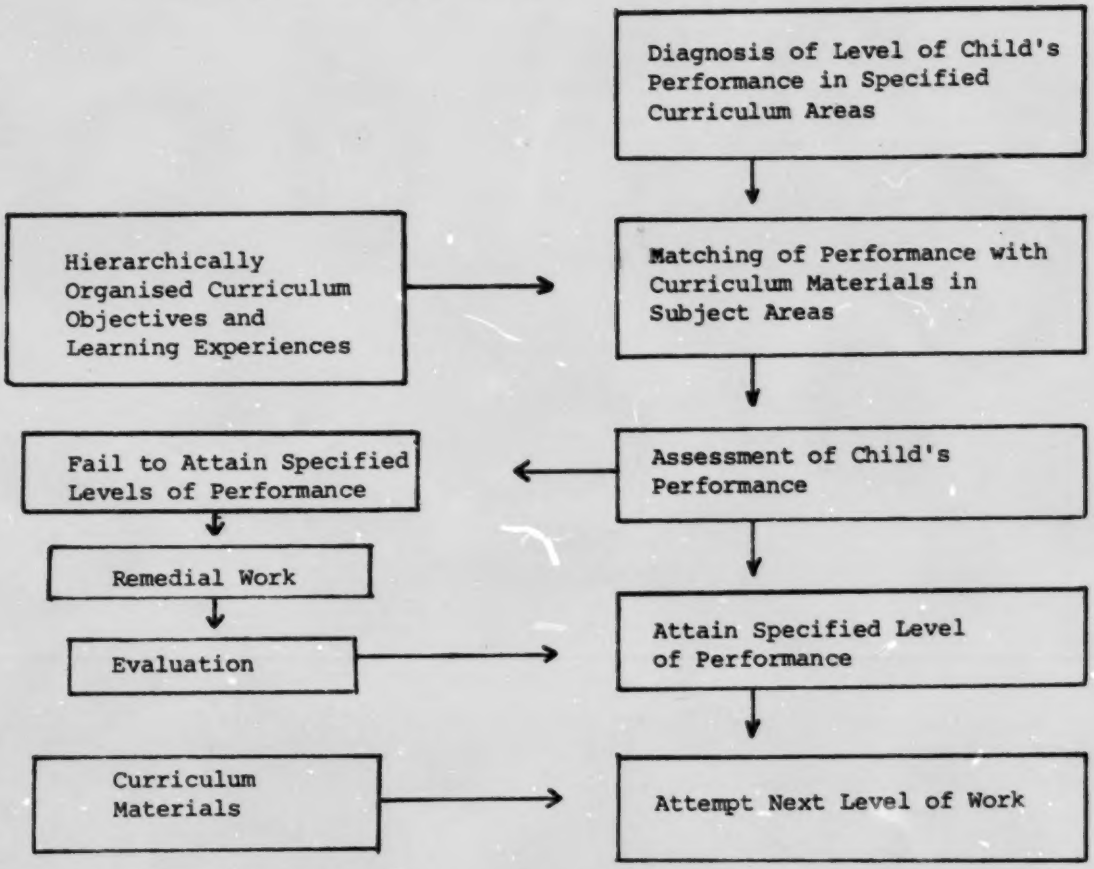

Diagnosis of Level of Child's Performance in Specified Curriculum Areas
Hierarchically Organised Curriculum Objectives and Learning Experiences
Matching of Performance with Curriculum Materials in Subject Areas
Fail to Attain Specified Levels of Performance
Assessment of Child's Performance
Remedial Work
Evaluation
Attain Specified Level of Performance
Curriculum Materials
Attempt Next Level of Work

FIGURE 1 Teacher-Learning Model for Behavioural Program

Such a procedure requires teachers to monitor constantly the adequacy of their initial diagnostic tests and the sequential organisation of their curricular skills.

Program Objectives

The behaviourist program, like other programs within the Mt Druitt Early Childhood Project, had objectives specified for three groups - children, teachers and parents. The overall effectiveness of the program should be judged in terms of whether the objectives for each group were achieved. The following discussion elaborates the objectives for each of these groups.

Children:

For children the program had the following objectives:

- The development of the pre-reading skills of visual discrimination, kinaesthetic discrimination, left-to-right progression, vocabulary, comprehension and literary appreciation.
- The development of the pre-writing skills of muscular co-ordination, manipulative skills, and specific writing and pattern activities in a developmental sequence.
- The development of the pre-number skills in the areas of classification, seriation, spatial relationships and numeration.
- The development of pro-social skills which relate to interaction with peers and adults, and those that relate to the use of materials.
- The stimulation of creativity by participation in art, craft and music.
- An expansion of the children's knowledge about health, safety and physical fitness.

The last two objectives represented not only the aims of the behaviourist program but reflected the school's policy in which the program operated and also the Project-wide objectives.

Instructional objectives, stated in behavioural terms, were listed for each instructional sequence. The specification of objectives as observable behaviours, wherever possible, enabled the teachers to determine whether or not the children had mastered them. This process resulted in a very lengthy, detailed curriculum (see Appendix A: Child-Centred Objectives) which was used directly for day-to-day planning and evaluation.

Teachers:

For teachers the Program sought to develop their knowledge, skills and attitudes so that they could effectively use specified Behaviourist strategies, such as the skilful use of social reinforcement. The specific skills that teachers had to develop are listed on the Instructional

Teaching Criteria Observation Form (see Figure 7).

Teachers were required to make frequent contact with individual children who were on-task using social praise to reinforce this on-task behaviour. Off-task behaviour was to be ignored.

Parents:

For parents, the program's objective was to involve them in the education of their children by providing opportunities for them to share in the schooling process. This overall objective entailed such activities as disseminating information to parents about the behaviourist program, offering opportunity for developing interactive skills with the children and the teachers in the preschool, linking school and home learning experiences and influencing parental attitudes in a positive direction toward an acceptance of the program.

Organisation of Children's Learning Experiences within the Program

Four components were essential for the implementation of the curricular experiences within the program. They were the detailed specification of curricular objectives and content, the children's initial screening test, the individual record cards and the class record cards.

Curricular Objectives and Content

As previously indicated the curriculum objectives and content in the key learning areas were determined in great detail and arranged in a hierarchy from easiest to most difficult tasks. These documents were kept under constant review and where necessary, modified (Appendices A & B summarise the essential curricular documents prepared for the program). While the lists do appear to be quite prescriptive, teachers often varied previous plans to take account of unexpected events occurring within the preschool or planned their day's instructional activities to incorporate special events into their ongoing plans.

The Screening Test

Initially, a screening test was designed to determine children's levels of performance in designated areas (see Appendix C). After a while, the teachers found that the most efficient method, in terms of administration, was to work through the skills itemised on the individual record card. However, continued implementation of the program saw the teachers and aides recommending a return to the original screening test. They considered that the screening tests expressed in greater detail and contained better descriptors of the behavioural measures needed in the preschool than the bald statements listed on the record card.

Individual Record Card

As well as the screening test, the teachers structured an individual record card listing the objectives to be reached over the year in pre-reading, pre-writing, pre-number and pro-social behaviours (see Figure 2). When planning activities the teachers divided the objectives into group segments, a term in length; and then into weekly segments usually selected on a suitability to a theme. An example of a weekly plan is included as Appendix B .

In practice, this record card became a source of continuous and corrective feedback on entry level placement and progress for the individual children. Also, any curricular segments that were redundant or any segments that needed supplementing, soon became apparent. The original record card was redesigned to form a term record card and this was used in 1977. Such a record card enabled the objectives to be defined behaviourally in greater detail.

Some curricular objectives were suitable for whole-group techniques. Others were more suitable for individual treatment. With either method, the teacher indicated whether the child had mastered the skill or not by recording the child's performance after working on the task. On achieving mastery, the child advanced to a new objective under the guidance of the teacher. If the skill was not mastered, the child worked with a variety of activities intended to shape the child's behaviour toward the final objective. The record card provided feedback to the teacher and helped refine and improve the structure and content of an instructional sequence each time it was used.

Class Progress Record

The record card also doubled as a class progress record. The class progress record provided a one-glance summary of all the children's progress in each area of pre-reading, pre-writing, pre-number and pro-social behaviours. This enabled the teachers to evaluate how effectively each unit or theme accomplished the development of skills and which particular skills needed to be reviewed.

Using the above records the teachers were able to organise their lessons. For example, for a term the same group of ten children worked with one teacher on the basic skills. The teachers and aides considered that this enabled them to locate individual difficulties and treat them intensively especially any recalcitrant problems. However, it would be possible to rotate the groups once every five weeks or every week and for another teacher to pinpoint those areas in which the children required assistance.

Consider an evaluation that was made in March, 1976 in pre-reading (see Figure 2). There were two groups of children: 31 in the morning session and 34 in the afternoon session. The teachers had chosen the following pre-reading skills for treatment:

1. listens attentively to stories (20, 19);
2. discusses pictures (17, 20);
3. turns pages starting at beginning of book (12, 17);
14. calls objects by their correct names (18, 26);
15. talks about possessions and work (19, 20).

The numbers after each skill indicate the children who demonstrated mastery with morning children first. From the results listed above the children were grouped according to mastery and non-mastery. The teachers worked with the mastery group on another objective while with the non-mastery the teachers continued working on the particular skill that proved difficult.

WHALAN PRESCHOOL - ACADEMIC OBJECTIVES

NAME : _____

A. PRE-READING

		AM	PM
1.	listens attentively to stories	20 *	19 *
2.	can discuss pictures	17	20
3.	can turn pages starting at baginning of book	12	17
4.	can move finger from left to right across page	2	4
5.	can recognise individual children's voices	-	-
6.	can imitate sounds made by teachers	3	1
7.	can distinguish between loud and soft sounds	-	2
8.	can complete a rhyming sequence	7	4
9.	can select objects the names of which have common initial sounds	-	6
10.	can follow three oral directions in correct sequence	11	12.
11.	can distinguish between shapes: square, circle, rectangle, triangle	10	17
12.	can distinguish through touch only, shape, size and texture.	-	-
13.	can trace simple outlines with finger following direction	9	16
14.	can call objects by their correct name	18	26
15.	can talk about possessions and work	19	20
16.	can select details from a story	6	8
17.	can relate experiences from a story	4	5

B. PRE-NUMBER

Can classify properties by

18.	size: big little	28	28
19.	length: long, short	1	1
20.	volume: empty, full	12	8
21.	height: tall, short	14	9
22.	mass: heavy, light	1	-
23.	time: morning, afternoon	-	-
24.	size: big, bigger, biggest	3	4
25.	length: long, longer, longest	-	2
26.	height: tall, taller, tallest	2	1
27.	mass: heavy, heavier, heaviest	-	-
28.	time: yesterday, today, tomorrow	-	-
29.	texture: soft, hard, smooth, rough	-	-

Can use such terms as

		AM	PM
30.	Over, under	1 *	3 *
31.	in, out	23	23
32.	front of, back of, side of	-	-
33.	above, below	-	-
34.	high, low	-	2
35.	down, up	2	3
36.	inside, outside	22	25
37.	middle	-	-
38.	more, less	3	1
39.	few, lot	1	1
40.	can count to ten rote	3	5
41.	can count to ten rationally	1	2
42.	can recognise primary colours	17	19
43.	can recognise secondary colours	-	-

C. PRE-WRITING

44.	has progressed from large arm movements to smaller arm movements	-	30
45.	can hold pencil correctly	2	3
46.	can position paper/chart correctly	-	1
47.	can sit squarely at a table	20	14
48.	can begin at correct starting point	-	-
49.	can move pencil from left to right across page	-	-
50.	can record from top to bottom	-	-
51.	has progressed from large model to smaller exercises on foolscap	-	-
52.	can free tear	-	-
53.	can tear to a line	-	-
54.	can free-cut with scissors	-	-
55.	can cut to a line	-	-

* No. of children achieving objectives

FIGURE 2 Whalan Preschool - Academic Objectives

WHALAN PRESCHOOL - SOCIAL OBJECTIVES

NAME: _____

A. [illegible] CHILD		AM	PM
1.	walks in classroom	28 *	28 *
2.	puts back toys where and as he found them	25	28
3.	quiet in book corner	15	21
4.	stays within boundaries	15	29
5.	uses equipment in correct area	28	31
6.	uses "please" and "thank you"	8	22
7.	uses materials correctly	30	33
8.	takes care of books	6	17
9.	loses temper	1	3
10.	asks questions	24	18
11.	explores objects in environment	18	14
12.	follows activities to conclusion	18	25
13.	uses materials in a variety of ways	15	15
14.	seeks help only when necessary	23	17
15.	tackles new tasks	14	18
16.	brings treasures to school	6	4
17.	uses toilet when necessary	7	7
18.	works alone	29	26
19.	interferes with other children's games	6	7
20.	waits turn	22	14
21.	uses people's names	21 *	23 *
22.	plays in group games	25	25
23.	helps other children	18	15
24.	when a mess is made or something is broken, child informs teacher	2	3
25.	child responds favourably to requests	26	31
26.	agrees to do odd jobs -		
	A: Self-oriented	7	8
	B: Teacher-oriented	19	24
27.	initiates interaction with teacher	28	30
28.	demands teacher's attention	16	10

B. AREAS			
1.	Sand	-	1
2.	blocks	12	13
3.	water	12	10
4.	climbing equipment	19	9
5.	paint	4	7
6.	animals	4	1
7.	woodwork	7	5
8.	puzzles	21	24
9.	book corner	17	21
10.	doll corner	12	14
11.	shop	2	1
12.	puppet	2	6
13.	creative active tables	26	27

* No. of children achieving objectives.

FIGURE 2 (Cont'd.) Whalan Preschool - Social Objectives

Classroom Organisation

To facilitate both children's and teachers' organisation the preschool area, both inside and outside, was organised into specific interest and/or activity centres (see Figure 3). The regular routines followed throughout the week enabled children and parents to settle into their set tasks and group activities.

Both the morning and afternoon sessions lasted for 2½ hours. For the first fifteen minutes two adults would take a group each of 20 children for such activities as morning greetings, health and weather talks and showing of treasures from home. The other two adults might prepare activities, take care of distressful children or answer parents' enquiries. The next two hours were regarded as "skills time" where each adult was responsible for the individual instruction of ten children. Outside the instructional time the children could move to any activity and juice was also provided in this time. For the last fifteen minutes the children came together for group activities such as songs, moving to music, listening to a story or finger play.

Throughout the session, but particularly during activity times, use was made of social reinforcement to achieve the desired objectives. The teachers found that success depended on the careful selection of activities in the first place, use of positive reinforcement and the careful recording of individual progress to pinpoint each child's level of mastery in the designated skill areas.

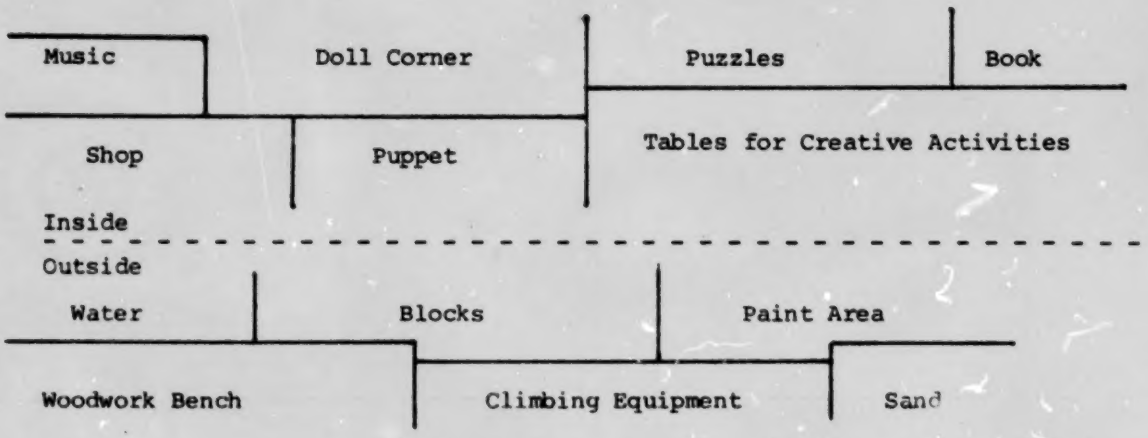


FIGURE 3 Layout of Preschool Area

Social Reinforcement

A major strategy for achieving goals set for the children was for the teachers and aides to use social reinforcement. It has been mentioned that unlike the Bushell model, a token economy was not employed. The teachers relied entirely on the reinforcing value of adult approval and praise. O'Leary and O'Leary (1972, p. 87) state:

> Teacher attention in the form of a pat on the back, a hug, a smile, or a word of encouragement can be one of a teacher's most useful tools. By systematically using such teacher attention, the frequencies of a great variety of problem behaviours in pre-school and elementary school children have been successfully reduced. Fortunately, most teachers find the systematic use of praise natural and uncomplicated, and since teacher attention can be used to decrease a wide range of problem behaviours and to increase many appropriate behaviours, teachers should first attempt to handle most problems with teacher attention. Only when praise is ineffective should more complicated and powerful procedures, such as token reinforcement programs be employed.

A specific skill that the teachers and aides had to develop was expertise in the use of descriptive praise. From general praise statements such as 'nice' and 'good'; the use of such expressions as "That's a lovely painting, Jim" or "I like the way you are packing away, Barbara" needed to be developed.

All of the descriptive praise statements illustrate two desirable features of praise statements. First, the child's name is used. In addition to personalising the contact between teacher and child, this practice takes advantage of the fact that the sound of one's own name is a positive event for most of us. Second, the praise specifically identifies the behaviour the teacher found commendable.

Teachers and aides within the program had to master the use of social reinforcement techniques and skills in order to implement the program successfully. The inservice training of teachers, the monitoring of their performance and feedback of the results of the monitoring were continual tasks. Teachers' behaviours within the program were rated on the Instructional Teaching Criteria Observational Form (see Figure 7) which enabled their strengths and weaknesses to be discussed. Regular inservice sessions were valuable for discussing overall planning and individual situations and to talk over aspirations, frustrations and successes that occurred. The value of this ongoing formative evaluation and feedback cannot be stressed too highly.

Time Out

The program sought the elimination of all harsh punishment and coercion from the preschool. Bushell (1973, p.74) considers that teachers should not punish for the following reasons:

1. It reduces the reinforcing value of the teacher's attention;
2. It is an inefficient way to teach new behaviours;
3. It can generalise to make an entire setting aversive;
4. It increases avoidance behaviours;
5. It promotes a variety of escape attempts; and
6. It may generate aggressive reactions.

Behaviour analysis techniques do offer some basic procedures for altering behaviour in such a way that undesirable or problem behaviours are eliminated and appropriate behaviours are strengthened without the use of harsh punishment.

One strategy, provided it is applied consistently from the beginning, is to ignore unwanted classroom behaviour while giving immediate praise and attention for its desirable opposite. This strategy also requires the teacher to be alert for opportunities to reinforce appropriate behaviours.

There were some behaviours, however, which the teachers considered competed with effective learning and so could not be ignored. These were termed major misbehaviours and required teacher intervention. These occurred when the possibility of physical harm was apparent. For example, a child who crawls onto the roof cannot be ignored.

Very early in the year, the teachers in the program set down certain rules which were explained to the children. Prohibitions were placed on behaviours that could injure people or damage property. At the beginning of the first term these rules were introduced and emphasised. Any violation of these rules led to the immediate removal of all possibility of reinforcement. This procedure was termed 'Time Out'.

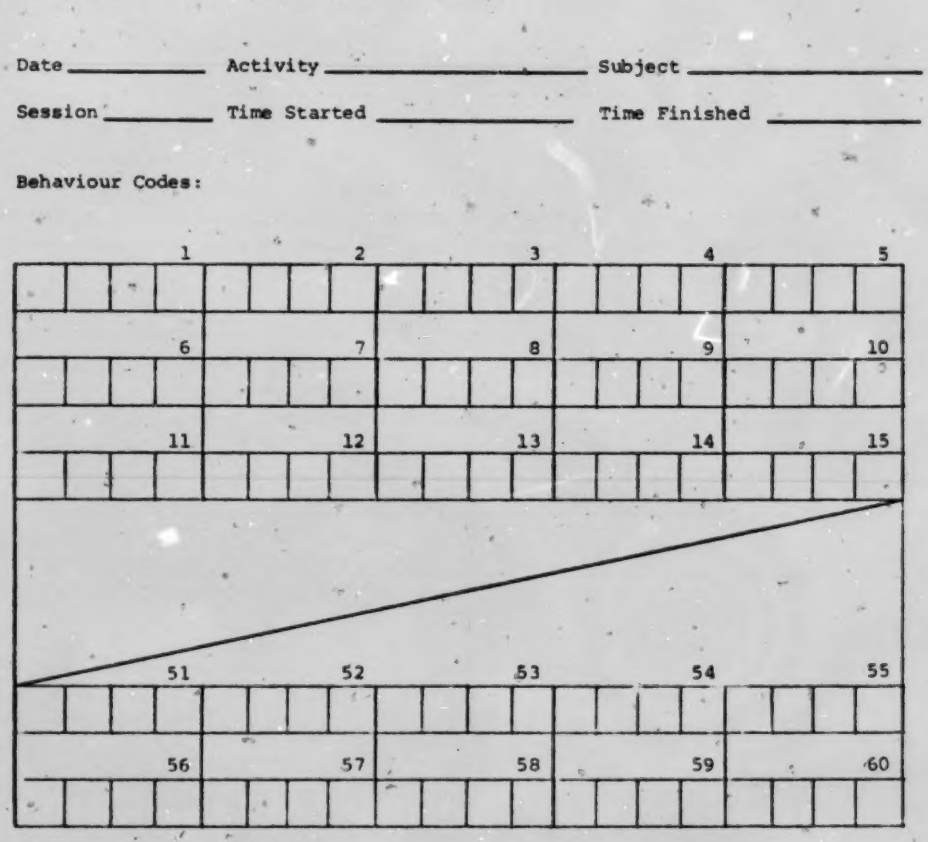


FIGURE 4 Frequency Count

For an example of Time Out in operation consider the case of two boys fighting. The teacher intervenes and explains that by fighting they may hurt each other and everyone will be unhappy. Without further comment, the boys are seated in chairs which are some distance from the rest of the children. After three minutes, the teacher indicates to the boys that they may return and the incident is over. The entire sequence is carried out in a non-emotional, matter-of-fact way. A rule is broken and there is an immediate consequence of the withdrawal of reinforcement. The teacher does not scold, admonish or lecture. The Time Out procedure is precise and exactly timed to follow the rule violation.

Children who didn't respond to 'Time Out' procedures

Some children present particular concern and require a different strategy to modify their behaviour. In such situations the first task was to define the inappropriate behaviour in behavioural terms. If this was not done, two difficulties arose. First, it was possible to label a child with terms like 'aggressive', 'shy and withdrawn' or 'directionless' without being certain as to what they meant. Second, and perhaps a more serious problem, was the possibility to have an impression of a child as being aggressive and then focus on only those behaviours that comply with that impression while ignoring all the evidence to the contrary. Behavioural definitions of behaviours enables consensus to be reached on the occurrence of that behaviour and so graph its frequency.

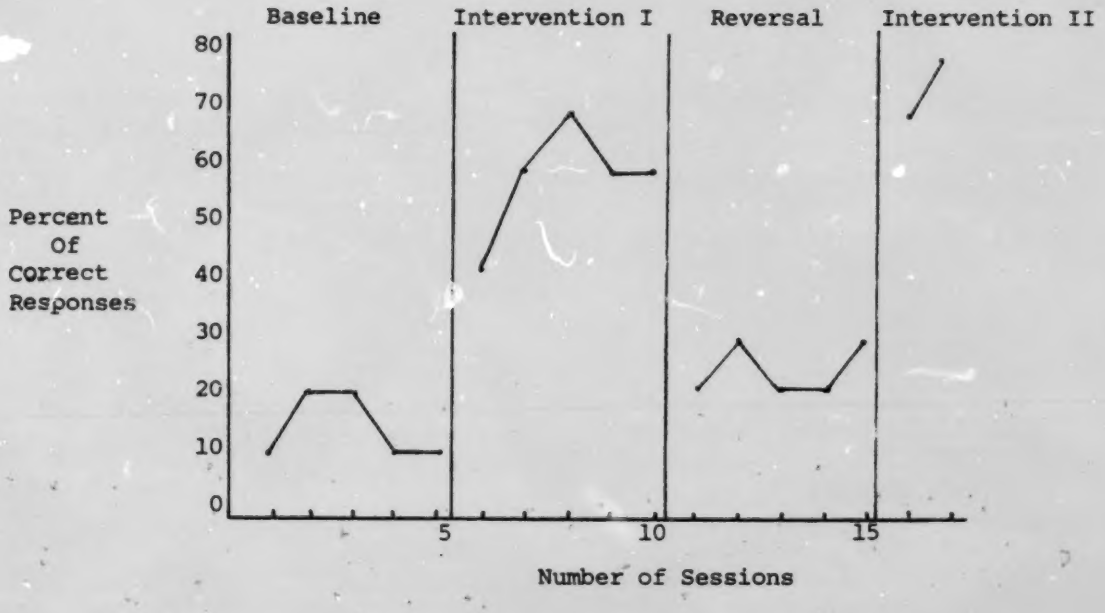
Baseline Data: The first step is to gather baseline data, detailing the frequency with which the inappropriate behaviour is occurring before treatment. Figure 4 shows a recording sheet for a frequency count which may be used over a sixty minute period. Each minute is split into four boxes for ease of counting. Obviously, some behaviours may occur more than four times in any one minute. The number of ticks per minute indicates the frequency of the behaviour. It can be seen that it would be necessary in the definition of the behaviour to specify when the inappropriate behaviour begins and when it ends. These observations over a number of sessions determine the baseline data.

Intervention: Once the baseline data were gathered the teachers could plan a strategy of intervention to modify the inappropriate behaviour (Phase 2). It the reinforcement is withdrawn, the inappropriate behaviour usually returns but not with the same frequency when compared to the behaviour before treatment. With the subsequent reintroduction of reinforcement the appropriate behaviour reappears and continues to reoccur more frequently. Eventually the inappropriate behaviour should be eliminated. Figure 5 illustrates the theoretical pattern that should appear.

The following is an illustration of what actually happened with a particular child (see Figure 6).

The example to be considered is the "directionless" child. The first problem was one of definition. The behaviour to be reinforced was one of application and concentration. It was decided that the recorder would time the number of minutes the child worked on one activity; timing from the moment the child began working on an activity until completion. It was made mandatory that the child work on the one activity for one full minute to score a frequency of one. Every one full minute after that would also be scored as one. The child was observed in ten minute blocks per session.

It may be noted that the procedure had some success in helping the child to apply himself to the set tasks.



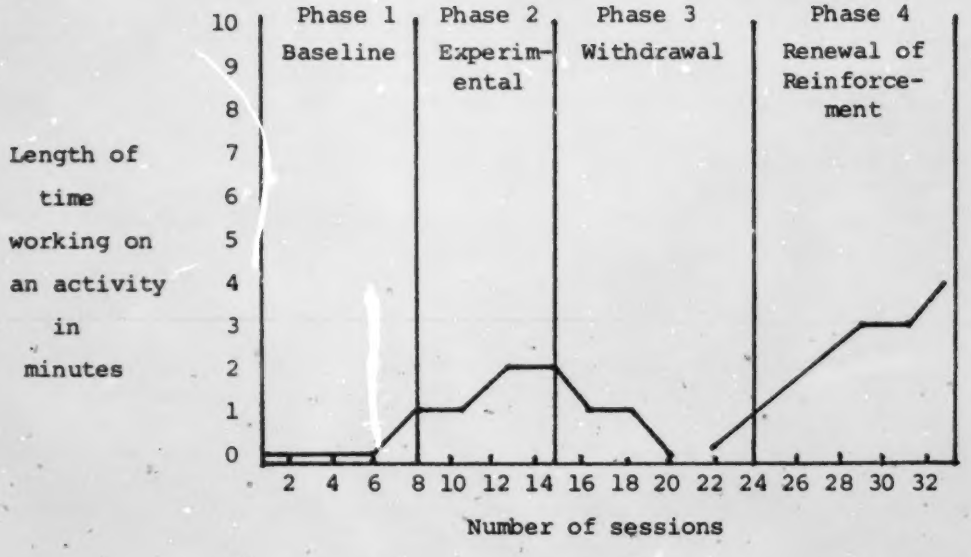
Baseline: Observations made on behaviour, prior to any direct intervention, indicated that the rate of correct responses averaged about 14% of the total responses made in each session, with little change from session to session.

Intervention I: During the first experimental phase, the rate of correct responses increased to about 58% as a result of some procedure.

Reversal: With the withdrawal of intervention, there is a return to the behaviour observed in the baseline date, but a slight improvement has been gained.

Intervention II: When the intervention procedures are reinstituted, the rate of correct responses immediately increases.

FIGURE 5 Theoretical Pattern illustrating use of Behavioural Modification Procedures.



Baseline: After eight sessions of observation the baseline data was graphed. At no time was the child observed to be working on any activity for longer than a minute.

Experimental: The teacher intervened and began working with the child on selected activities. The child's concentration span began to increase.

Withdrawal: On withdrawing reinforcement, the child's behaviour returned to the baseline level.

Renewal of Reinforcement: However, as soon as teacher's attention was reintroduced, the child quickly recovered and improved to working on an activity for four minutes.

FIGURE 6 The "directionless" child

Fidelity to Specified Program Teaching Behaviours

One of the crucial defining features of the program was the behaviours of the teachers and aides. A range of criteria was set on which the behaviours of the adults in the program were rated (see Figure 7). For example, on inspection, it can be seen that no disapprovals were expected from the teachers while 100% contacts with the children had to contain praise.

In April, 1976 all the adults were monitored with this form. Perhaps the most dramatic improvement, when compared with December, 1975, was that the frequency of on-going interactions approached the criterional level prescribed. No adult needed to use Time Out procedures nor were there any disapprovals. However, the staff was aware that there were two features requiring improvement. 'Descriptive' praise was used less frequently than 'general' praise and this imbalance needed to be reversed. As well, fewer than 90% contacts with prompts also contained praise. The staff felt that this particular requirement was too rigorous and unrealistic; and suggested to lower the criterion level of 70%. Generally, though, the teachers' and aides' behaviours were being shaped to meet the demanding prescriptive criteria. There was a shared feeling of developing ease when using descriptive praise but it was also felt that further practice was required to develop expertise in its use.

To keep the teachers and aides informed about general pedagogical and Project developments, several approaches were adopted. A number of Project newsletters were distributed to the teachers. These contained feedback on the current state of the Project, evaluation information and relevant articles of a professional nature. For example, one issue reported to the teachers and aides on the Schaefer-Aaronson System Behaviour Inventory (a rating scale of children's behaviours) and included articles on "Water Play for Preschoolers" and "Behaviour Modification" - a perspective on critical issues.

Further relevant articles and books were offered to the teachers and aides for their use. For example, some of these included Macht's Teacher Teachim, Wetsel's Behaviour Modification Techniques and the Training of Teachers' Aides , and Skinner's Some Implications of Making Education More Efficient .

Involving Parents

Parental involvement in the preschool was an important objective of the program. Over the year the staff attempted a variety of techniques designed to encourage parental involvement. Some of these strategies were:

1. Morning tea with parents;
2. A roster system for working in the preschool;
3. Use of 'Parents in the Preschool' videotape made by the teachers during their training course;
4. List of activities parents could do displayed in the preschool;
5. Use of administration block for displays including books and pamphlets;
6. Setting up of Toy Library to be run by parents.

Within the preschool parents talked with and listened to the children as they worked, read stories, helped with art and music activities, took charge of activities such as supervising the climbing equipment or the painting area, assisted during transition periods by supervising the clean-up

Date: _____ Teacher: _____ Observer: _____

1. ON-TASK OBSERVATION

Time Began _____ Time Ended _____ Total Time _____

Number of Children in Group _____

Minutes: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

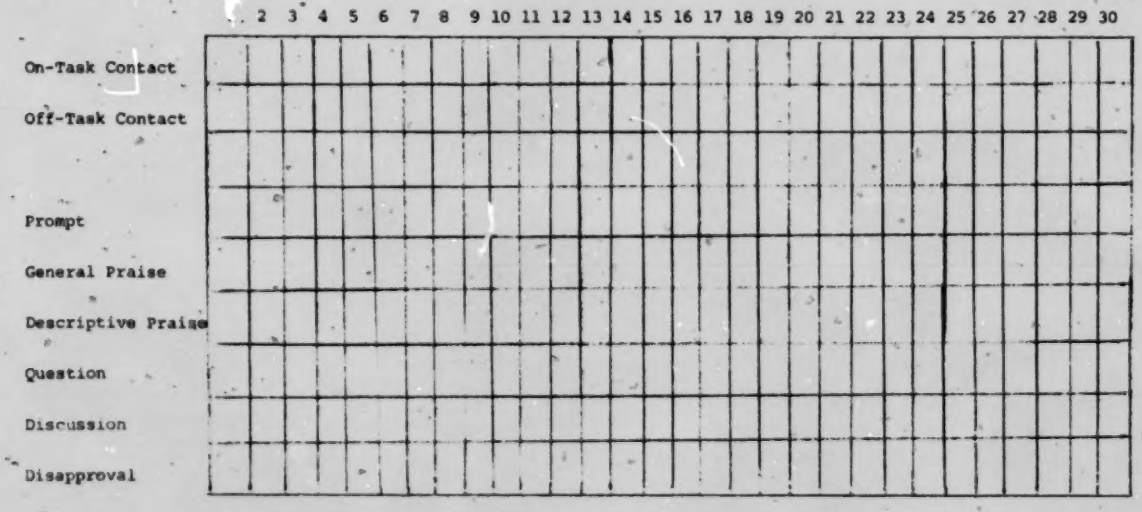
6 _____ 7 _____ 8 _____ 9 _____ 10 _____

Percent On-Task = $\frac{\text{Number of children On-Task}}{\text{Number of children in group x 10}}$ = _____

2. TEACHING OBSERVATION

Time Began _____ Time Ended _____ Total Time _____

Contacts


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
On-Task Contact
Off-Task Contact
Prompt
General Praise
Descriptive Praise
Question
Discussion
Disapproval

3. SUMMARY - INSTRUCTIONAL TEACHING CRITERIA

80% Children On-Task	Yes	No
100% On-Task Contacts	Yes	No
100% Contacts contain Praise	Yes	No
90% Contacts with Prompts also contain descriptive Praise	Yes	No
0% Disapprovals	Yes	No
Time-out (if used) is used approximately	Yes	No

FIGURE 7 Instructional Teaching Criteria Observation Form

Definitions used in Instructional Teaching Criteria Observation Form

Behaviour	Definition
On-Task:	*A child is working on or looking at his materials, is in contact with the teacher and is not disturbing another child.*
Off-Task Contact:	*Teacher contact is made to a child who is not working or looking at his materials or is disturbing another child.*
On-Task Contact:	*Teacher contacts a child while he is working on or looking at his materials, is not disturbing another child, or is sitting quietly waiting for the teacher's contact.*
Prompt:	*A verbal request from the teacher for a specific response: "Read this sentence," or "Write this letter".*
General Praise :	*Teacher approval which does not specifically state what behaviour is being praised, for example, "That's nice", "Good", "Fine".*
Descriptive Praise:	*Teacher approval which names the response being approved, for example, "You're a good boy for putting the blocks away", "That's a lovely painting!"*
Question:	*Teacher asks a specific question, for example, "How many legs on that man?", "What colour is the crayon?"*
Discussion:	*Teacher discusses a specific task or subject, for example, "First of all I paste the back of the picture, then I press it on to the paper and smooth out the wrinkles, etc."*
Disapproval:	*Teacher tells a child he is wrong by use of a negative statement such as "That is wrong". "That's not correct." Or the teacher requests that the child change an appropriate activity with statements like, "Sit down," "Turn around", or "Get back to work". Perhaps the most commonly used disapproving comment is "Shhhh!"*

FIGURE 7 (Cont'd.) Definitions used in Instructional Teaching Criteria Observation Form

of one activity and helped prepare for the next, helped the children with individual tasks, assembled samples of children's work for display, prepared materials for class activities and collected materials at home.

As well, parents were kept regularly informed about the program, the Project and other information of possible interest by regular newsletters sent home to parents. However, the most useful channel to encourage parental involvement was the numerous informal networks that existed. A great deal of use was made of these communication links.

PROGRAM EVALUATION

Evaluation of Child-Centred Objectives

Throughout the year the teachers were constantly evaluating the children's performance levels against the designated tasks. However, it was also considered essential to undertake some rigorous summative evaluation of the child-centred objectives. Figure 8 details the results of this summative evaluation.

Inspection of Figure 8 indicates that in few areas were the performance levels above 90 percent. To a large extent three factors accounted for the results here. First the performances of children at preschool age are heavily influenced by developmental factors. While the teachers always tried to modify curricular activities to match the developmental growth of all children, this was not always possible. Second, the areas listed embrace a large number of sub-skills and most often children's performance on these skills reached the required mastery levels. However, the averaging of results tends to mask the different difficulty levels of these skills. Third, the Figure aggregates the data for all children. The results of some children who needed continuous remedial work are included with the results of other children who performed consistently well in all areas.

Overall the teachers and aides considered that the program had accomplished the majority of the stated objectives.

This internal evaluation of child-centred objectives was made through the use of the class progress record providing a one-glance summary of children's mastery in each area of pre-reading, pre-writing, pre-number, physical education/music and pro-social objectives. This enabled the teachers to evaluate how effectively each unit or theme was accomplishing the development of skills. It also indicated the particular skills needed to be revised for some children.

A copy of the evaluation results for December, 1977 is included (see Figure 9). These results reveal that out of a class size of 80 children, 83% listened to stories, 9% could discuss pictures and 83% could turn pages from the beginning of a book.

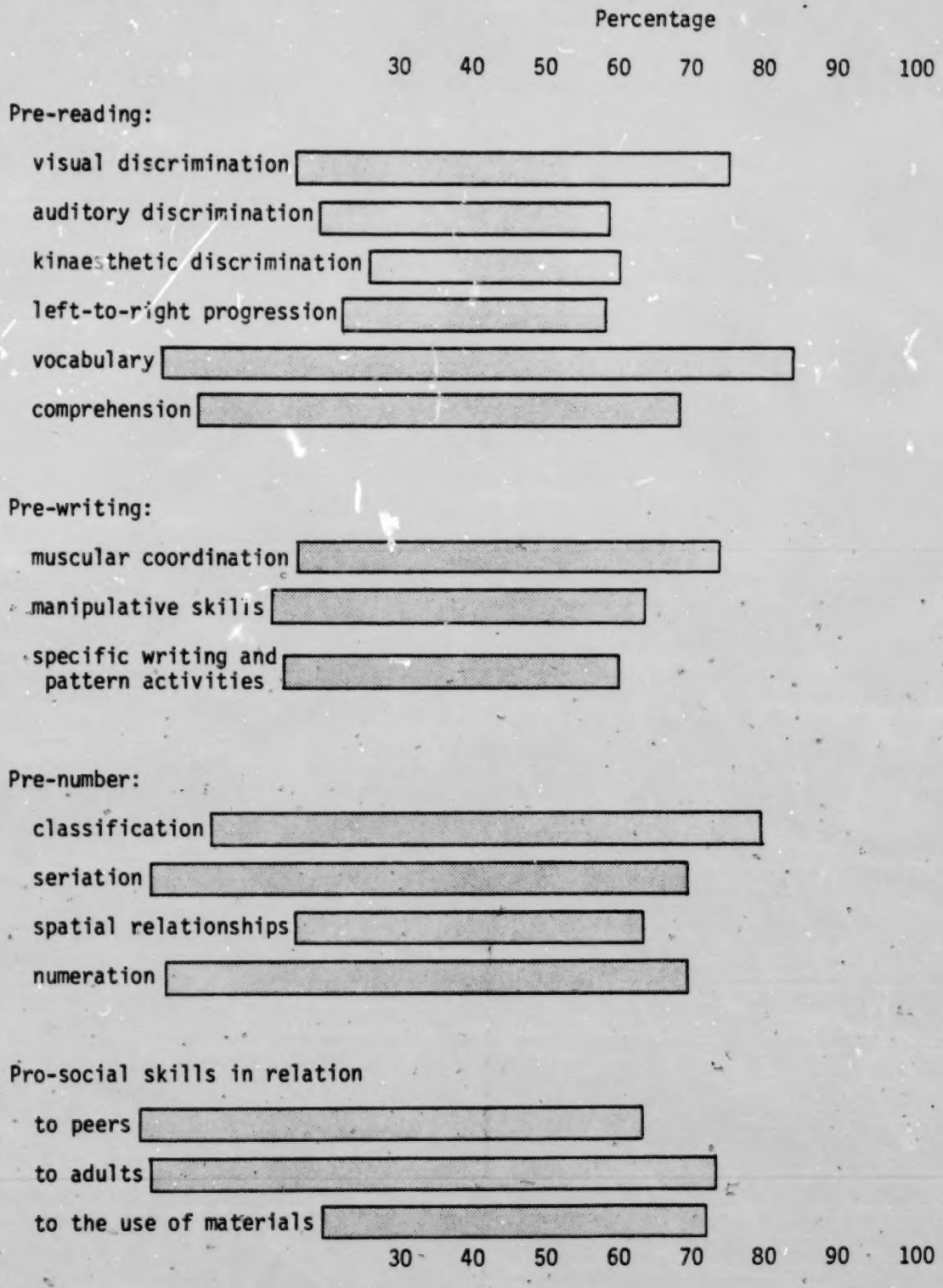


FIGURE 8 Percentage of Children Mastering the Specified Terminal Objectives Prescribed for the Behaviourist Program, 1977

		% of children achieving mastery
A.	**PRE-READING**	
1.	listens attentively to stories	83
2.	discusses pictures	93
3.	turns pages from beginning of book ..	83
4.	moves finger from left to right	58
5.	recognizes children's voices	50
6.	distinguishes between loud and soft sounds	63
7.	follows three oral directions in correct sequence	48
8.	distinguishes between shapes: circle ..	81
	square ..	73
	rectangle .	58
	triangle ..	83
9.	distinguishes through touch only: shape	58
	size ..	53
	texture	55
10.	traces simple outline with finger ..	74
11.	calls objects by their correct names ..	85
12.	talks about possessions	83
13.	selects details from a story	66
14.	relates experience from a story	25
B.	**PRE-NUMBER**: uses such terms as	
15.	big, little	85
16.	long, short	78
17.	empty, full	81
18.	tall, short	58
19.	heavy, light	73
20.	morning, afternoon	58
21.	soft, hard	84
22.	smooth, rough	69
23.	fat, thin	78
24.	push, pull	85
25.	loud, soft	86
26.	awake, asleep	76
27.	on, off	85
28.	stop, go	85
29.	fast, slow	85
30.	wet, dry	83
31.	in, out	83
32.	hot, cold	95
33.	day, night	79
34.	over, under	84

FIGURE 9 Academic Objectives - 1977 results

		% of children achieving mastery
35.	front of, back of	76
36.	above, below	66
37.	high, low	53
38.	down, up	73
39.	inside, outside	83
40.	middle	76
41.	more, less	58
42.	few, lot	65
43.	counts to ten rote	70
44.	knows rationally: 1	79
	2	83
	3	79
	4	78
	5	75
	6	58
	7	64
	8	63
	9	58
	10	55
45.	recognizes: yellow	71
	red	83
	blue	79
	green	70
	brown	65
	orange	75
	purple	61
	black	80
	white	83
C.	**PRE-WRITING**	95
46.	uses large arm movements	95
47.	uses small arm movements	73
48.	holds pencil correctly	78
49.	positions paper/chart correctly ..	46
50.	sits squarely at table	58
51.	begins at correct starting point ..	59
52.	moves pencil from left to right ..	84
53.	free tears	43
54.	tears to a line	81
55.	free-cuts with scissors	79
56.	cuts to a line	

Cont'd. over page

		% of children achieving mastery
C.	**PRE-WRITING (Cont'd.)**	
57.	copies patterns by: lacing	41
	sorting	71
	modelling	76
	hammering	34
	matching	45
D.	**PHYSICAL EDUCATION/MUSIC**	
58.	hops	74
59.	jumps	86
60.	skips	53
61.	climbs	93
62.	walks to music	72
63.	runs to music	71
64.	skips to music	33
65.	marches to music	71
E.	**SOCIAL OBJECTIVES**	
1.	walks in classroom	88
2.	returns toys neatly	85
3.	quiet in book corner	85
4.	stays within boundaries	86
5.	uses equipment in correct area	84
6.	takes care of books	84
7.	uses 'please' and thank you'	84
8.	uses materials correctly	91
9.	asks questions	50
10.	explores objects	30
11.	follows activities to conclusion ..	66
12.	uses materials in a variety of ways ..	33
13.	seeks help only when necessary	86
14.	tackles new tasks	55
15.	brings treasures to school	53
16.	uses toilet when necessary	86
17.	works alone	81
18.	interferes with other children's games	6
19.	waits turn	82
20.	uses people's names	81
21.	plays in group games	36
22.	helps other children	24
23.	when a mess is made or something is broken, informs teacher	64
24.	responds favourably to requests ..	88
25.	does odd jobs when (a) self-oriented	69
	(b) teacher oriented	66
26.	initiates interaction with teacher ..	59
27.	demands teacher's attention	4

COMMENTS: _____

FIGURE 9 (Cont'd.)

As well as the summary evaluation of the objectives that were mastered by the end of 1977, an internal comparison was made between eight preschoolers' and eight nonpreschoolers' mastery of the preschool objectives on entry into Kindergarten 1978. It is appreciated that the sample size is small but the results are taken as suggestive of possible trends.

In pre-reading, on all skills, more preschoolers demonstrated mastery than nonpreschoolers. The preschoolers especially had a more elaborated vocabulary and were more skilled in literary appreciation.

With pre-number, the direction of competency was again in favour of the preschoolers. Only the concept 'smooth-rough' proved difficult for both groups. The preschoolers were more skilled in seriation and classification. In pre-writing differences were not so pronounced since many of the stated objectives were developmental skills. However, the preschoolers were especially adept with taught skills involving the specific writing and pattern activities. With pro-social behaviour the preschoolers were described as "asking more questions", "using materials in a variety of ways", "following activities to their conclusion", "bringing their 'treasures' to school" and "initiating interactions with the teacher". Two behaviours that did not differentiate preschoolers from non-preschoolers were 'explores objects' and 'helps other children'.

These results suggest that the preschool program was successful in its aim of developing language competency and task mastery as well as promoting prosocial behaviours.

An external comparison was made between 12 preschoolers and 12 non-preschoolers at Kindergarten entry on four standardised achievement tests used in the Project - Circus 1 (Vocabulary); Circus Maths; Boehm Form A (Concepts) and a Pre-reading test. The results of this comparison can be found in Table 1 . All comparisons significantly favour the preschoolers so supporting the trend found with the internal comparison previously mentioned ($p<.05$).

Table 1 1978 Pretest Scores: Preschoolers v. Nonpreschoolers

	Circus 1		Circus Maths		Boehm		Pre-reading	
	PS	NPS	PS	NPS	PS	NPS	PS	NPS
$\bar{X}$	33	27	15	11	35	28	15	11

PS = preschool children NPS = nonpreschool children

Teachers' Ratings of Preschool Children's Behaviours

A Project-wide teachers' rating scale was designed to gather information on the children's language, achievement need, pro-social behaviours, anxiety, dependency and creativity. The preschool teachers used this instrument to track change in children's behaviour over the year. Table 2 presents the means for five of the dimensions for the program for March and December, 1977.

Table 2 Means for Five Dimensions on Preschool Observation Scale for March and December, 1977

	Behaviourist	
	March	December
Language	2.96	3.54
Achievement	3.26	4.44
Prosocial	3.42	4.50
Aggression	2.22	1.61
Anxiety	2.63	2.03

Of the 30 items listed on the rating scale in December, the following behaviours were rated as frequently occurring by the teachers: answers questions appropriately, attempts routine tasks independently, works to complete an activity, expresses interest in set tasks, participates in group activities, initiates new activities without assistance, initiates interaction with other children, approaches tasks with assurance, waits turns and shares materials, and follows classroom rules and procedures.

The following behaviours were rated as seldom occurring: disrupts activities, stays near or follows around another child, fights with other children, withdraws when approached by an adult, stays near the teacher and seeks physical contact, expresses dislike of activities, makes unnecessary demands for assistance, recognition or attention, and needs reassurance when attempting tasks.

Table 2 summarises these ratings of individual terms. By the end of the year the teachers rated an improvement in the children's language, achievement need and prosocial behaviours while rating a decrease in aggressive and anxious behaviours. Of particular interest was the teachers' rating of a movement by children from a passive dependency on adults to a more active affiliation with their peers. Further, the teachers rated the frequency of creative behaviours low and there was no change from this position over the year. However, generally, the basic assumption that the Behaviourist program had a beneficial influence on the language, work habits and prosocial behaviours of the children is reflected in the systematic ratings made by the staff over the year.

The same rating scale was used by the Kindergarten teachers to detect differences between 12 preschoolers' and 12 nonpreschoolers' behaviour on kindergarten entry. The major differences to emerge were that the preschoolers more frequently adopted varied role plays, initiated new

activities without assistance, planned and prepared for a task, made explanations, talked about their treasures, played with structured materials in novel ways, and approached tasks with assurance. It was concluded that the program adequately prepared preschoolers for entry into kindergarten.

Evaluation of Teacher-Centred Objectives

It was considered that one of the most critical defining features of the Behaviourist Program was teacher behaviour. A number of criteria were fixed which prescribed the behaviour of teachers in this program.

In November (1977) the four adults in the preschool (2 teachers and 2 aides) were monitored through the use of the Instructional Teaching Criteria Observation Form (see Figure 7). The length of each observation was ten minutes. The summary of one of these observations early in the year follows:

Adult 1: The teacher's verbal interaction with her pupils consisted of 18% prompts, 34% general praise, 18% descriptive praise, 22% questions, 8% discussion, 0% disapproval and 0% off-task contact.

Adult 2: The teacher's verbal interaction with her pupils consisted of 14% prompts, 10% general praise, 30% descriptive praise, 22% questions, 24% discussion, 0% disapproval and 0% off-task contact.

Adult 3: The teacher's verbal interaction with her pupils consisted of 32% prompts, 8% general praise, 20% descriptive praise, 28% questions, 12% discussion, 0% disapproval and 0% off-task contact.

Adult 4: The teacher's verbal interaction with her pupils consisted of 12% prompts, 25% general praise, 25% descriptive praise, 38% questions, 0% discussion, 0% disapproval and 0% off-task contact.

General comments

The teachers' behaviours met all requirements of the Instructional Teaching Criteria Observation Form. Time-out was not used, 80% of the children were on-task, 100% of teacher contacts were with on-task children, 100% of these contacts contained praise and 0% disapprovals were used. The only criterion not met was that 90% of the contacts with prompts also contained descriptive praise. The teachers still had included too much general praise in their reinforcers to achieve a performance level of 50%. Further practice was still required to develop expertise in the use of descriptive praise.

Discussion with the teachers and aides over the year had frequently led to the problem of the 'artificiality' of the over-use of praise. The teachers felt that the criterion level of 100% of contacts needing to contain praise lead to over-saturation. The children appeared to develop an attitude that the praise was not sincere and so its reinforcing value was lost. At different times the teachers and aides deliberately varied and reduced the frequency of praise to a 70% level. They found that more children responded at this level rather than the 100% criterion recommended.

The overall results suggest that the teachers, while not always finding the task easy, could successfully implement a behaviourist program.

Evaluation of Parent Centred Objectives

Over the year a number of parents became closely involved in the preschool. These parents interacted successfully with the children, shared in a team teaching situation with the teachers and helped prepare materials. However, the level of involvement in terms of sharing decision-making with teachers was not high. The historical unwillingness of school administrators and teachers to share decision-making, made the task of encouraging parents into this new role a difficult one.

The results in summary form, are presented under the headings:

What we found
Developmental inventory
What effects preschool had
What might it mean?

Objective evaluation of parental attitudes to the program was undertaken through the Project-wide administered instruments. The following is the summary of results presented to parents (From December 1977 Parent Newsletter). (Figures 10 & 11)

"Report to parents on parent interview

At the beginning of the year a group of parents were asked what they expected of preschool - what things should be done and how they should be done.

Most parents hoped preschool would be a place where

- children could play with other children the same age.
- they could learn to get along together by sharing and being less demanding and making good friends.
- they could regularly be with others in a place where there was space and interesting equipment and where there were different things to do.
- they would become less dependent and more confident of themselves.
- they would develop many new skills especially language, thinking and number skills.
- they would begin to cope with a routine which included some group organisation and some set tasks which would help them to cope with the demands of school.

Generally these expectations were met. At the end of the year most parents reported new and increased skills in their child's behaviour and thought that preschool had helped to achieve them. Some, of course, saw really exciting changes in some areas - speech improvements, overcoming shyness, greater confidence, better communication, better body control and so on. Others thought the regular contact with children and teachers at preschool was convenient and worthwhile, giving them some time to themselves and providing good experiences for their children.

Most disappointing for some parents were the increased control problems they felt they now had even though their children were better able to look after themselves and certainly more able to work independently at tasks. Some had difficulties in keeping up the regular trips to the preschool each day, but kept on.

Newsletter

MT DRUITT EARLY CHILDHOOD PROJECT

MAKING COLLECTIONS

Do you wonder whether it is all worth while finding space for the rubbish that Jenny brings into the house? Collecting and sorting is an enjoyable game for most children. The way things feel, their shapes and colours, and even their uses are good reasons for collecting and talking about them. Leaves, stones, shells, bottle tops, buttons and keys may for example be sorted, put in boxes, counted, re-examined for re-sorting, or used in play. Bottle tops may be used as money, for instance and fresh green leaves could be sold as vegetables to mother in exchange. While she is sorting and playing, Jenny is learning about differences in surface texture, size and colour, and may learn other features as well which will increase her enjoyment of the small world she lives in. Help her to give names to these qualities. 'Look its shiny', 'This one has points on it' and so on. You might even find some new things yourself. See how many different ways the same things may be sorted. "Can those ones go together?" "Why not?" "What do you call these ones?".

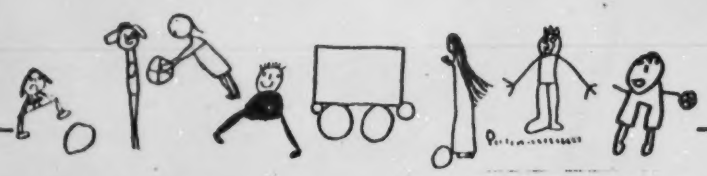


FIGURE 10 Newsletter

Newsletter

MT. DRUITT EARLY CHILDHOOD PROJECT

WELCOME

Dear Parents,

We would like to welcome you and your children to the Mt. Druitt Early Childhood Project. In this newsletter, we would like to tell you a little about the Mt. Druitt Early Childhood Project so that you can share some of the experiences that your children are undertaking.

Have you visited your preschool lately? Please feel free to come in and help in any way possible.

SHOULD MY CHILD ATTEND PRESCHOOL?

This is a question that is often asked and one that you've obviously thought a lot about. It is a question that has many answers.

We believe that not all children should attend preschools for there are many children who can benefit from being with the brothers, sisters and friends at home.

In many ways the most important educators for the child under five are the parents. It is through their interactions with their children that the child learns to walk, run, talk and so on. It is the parents who teach children ways of behaving that they believe are correct.

Often the greatest benefits come from the school and parents working together to help each child benefit from their experiences. To expect the school to make the quiet child more open or to quieten the aggressive child is generally asking too much. For such actions need the co-operation of all. Remember that your child is only at pre-school for 2½ hours each day.

HOW ARE YOUR PRESCHOOLS RUN?

As you know the preschools are under the authority of your School's Principal and the Infants Mistress. To help things get off the ground there is a committee which meets regularly in one of the Mt Druitt schools, called the Field Committee. This Committee will soon have representatives from parents of each school on it and they will be able to forward your ideas and suggestions on to the Field Committee. If you wish to find out further information about this Committee ask at your preschool.

WHAT ARE WE DOING?

When parents talk about educational research they often have ideas of people working in laboratories with mice. This is not what we refer to as educational research. Really we are trying to work co-operatively with parents and the community to provide the most appropriate and worthwhile experiences for your children.

In so doing we have set up four school based programs and a home-based program. We are then going to try to find not "which is the best program?" (for they are all good programs otherwise we wouldn't be working on them) but what effects each program has on each child.

Questions we would like to answer include -

Did the children enjoy the program?
How do the parents feel about their child's participation?
How does the child settle into school later on?
Can we design more effective preschool programs?

Only time will tell whether we can answer these and the numerous other questions that can be raised.

Do you know about our home-based program and the playgroups operating in the school? If you need information ask at your preschool centre?

Newsletter

Give Me One Set of Cans!

Collect food cans of different sizes:

Baby food cans

Evaporated milk cans

Jam cans

Fruit cans

Trim down the top rims with a can opener until they are smooth.

. Two cans and some string make a telephone or walkie talkie.

. Four cans which fit inside each other will do for building a tower. Cover with bright wrapping paper, if you like.

. Use cans for storing collections of beads, pebbles, pegs, bottle tops.

. Make an obstacle course by placing tins on a narrow path with some space in-between. One child is a leader, moving between the cans without knocking them over; the others follow and copy just what he does.

. Make stilts with two cans and two pieces of string.

. Enjoy water play, pouring water from one can into another and counting how many small cans it takes to fill a big one.

FIGURE 11

Newsletter

June, 1976.

WELCOME

PARENTING, TEACHING AND CHILD DEVELOPMENT

. What makes for good parenting?

. Does it make any difference what we do to children?

. Is there any connection between learning and development?

These and other questions were recently raised in an article by Dr. Ira Gordon, a prominent writer in the area of child development. Dr. Gordon makes the following points in his article:

. the parent is a primary teacher of a child.

. essentially parents teach their children the same way that teachers teach in that they provide a learning environment, model behaviour and engage in direct instruction.

Dr. Gordon highlights what he considers to be the important factors in parenting which he lists as the "5 P's", "4 R's", and the old reliable "TLC".

THE "5 P's"

1. *Provision of a learning environment*

There should be opportunities for a variety of stimulating things in the home and out of home experiences such as trips to supermarket, fire station, provision of reading material, etc. All in all the child should be able to "mess and manipulate" toys and go back to the old, familiar and dog-eared object and enjoy it all over again.

2. *Predictability*

Children need to know what is happening and why it's happening.

3. *"Ping-pong" - I do something you do something*

The child needs to realise that the adult is watching him when he does attempt different tasks.

4. *Persistence*

The child is interested in an activity and is permitted and encouraged to continue it but we need to realise when it is necessary to back out.

5. *"Professor"*

No-one pays any attention whatsoever - talking, just talking.

THE "4 R's"

1. *Responsiveness*

We need to be responsive to the child's initiatives and needs. We need to learn to give our children time before we make our demands.

2 & 3. *Reasoning and Rationality - "the because"*

This refers to the need to control children with explanations.

4. *Reading*

The modelling behaviours of the home are critical. If parents do not read, if the children don't see their parents reading, then this is a poor beginning. Reading to a child needs to be personalized and encouraging for them to imitate the adult.

"TLC"

It does not help the child if you have provided for a stimulating material environment, played some form of barren ping-pong, reasoned with your child, responded in certain kinds of ways, set up rules and so forth, if all that was done without warmth.

Responsiveness in a warm fashion does a variety of things for children as it influences personality development and intellectual development. It cannot be scheduled.

Should you wish to read the complete article, ask one of your teachers or aides for a copy.

It seems that teachers need to know more about what expectations parents have of preschool for their children and hear more about the effects it is having. This can only come about by more frequent communication between parents and teachers so that both are working towards the same shared goals in the same sorts of ways."

Summation

Overall through the consolidation of two years applied experiences the program achieved most of its objectives. Appropriate reinforcers were further refined and elaborated especially with the use of descriptive praise. The careful recording of children's progress was maintained through the detailed use of individual record cards. The continued and refined use of pretests enabled teachers to locate areas of individual children's specific strengths and weaknesses. Those children who were not mastering a specific skill received individual teacher attention until mastery was achieved. By the regular use of individual pupil record cards the teachers were able to maintain a detailed source of continuous and corrective feedback on pupil entry level placement and progress.

In terms of teacher-centred objectives, the teachers' behaviours met most requirements of the prescribed teacher-performance criteria. This conclusion does not support the view frequently expressed that such programs are theoretically plausible but in practice impossible to implement. Most of the difficulties that occurred during the year were resolved through discussion and mutual support. Problems which did arise generally focussed on personality factors. The teachers found it difficult to adjust, at first, to the team-teaching situation and the need to be prepared to appreciate and tolerate differing viewpoints cannot be overstressed.

The program presents itself as a self-contained evaluating package. It stipulates that educational objectives be stated in behavioural terms. By so doing, objectives are made accessible to measurement. It was effective in achieving the stipulated program objectives as well as the broader Project goals and teachers found it relatively easy to implement. The program appears a viable model for a school to adopt if the objectives discussed are so valued. Perhaps the most appropriate final comment that can be made comes from an external observer's comments on the program:

"The observer has obviously seen the program at a time of year when both the teachers and children are working skilfully and securely in the routines established. Perhaps the most startling difference observed in this program is the teacher control of the children in group sessions.

Individual teaching situations appear to be of a thoughtful, warm and high standard. Most impressive! At worktime the children were free to choose activities which were selected beforehand by the staff. Some of these were of an expressive nature.

The observed program is certainly consistent with the stated principles. Yet there are other features of the program which are not stated in the objectives but are, in the opinion of the observer, apparent. There is the warmth of the inter-personal relationships between adults and children, and the child/child. Also, during the worktime, the children are freely making decisions and acting independently. It appears a pity that these factors are not more widely acknowledged as being integral to the program. "

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APPENDIX A

Child-Centred Objectives

I. PRE-READING PROGRAM - OBJECTIVES

1. Literary Appreciation

Child asks for some stories from day to day

- teacher reads stories to group/class, e.g., fairy tales like The Three Bears, Jack and the Beanstalk, nonsense books like Dr Seuss series;
- teacher encourages children to bring in books from home; N.B. teacher needs to make a point of reading the book;
- picture stories.

Child listens attentively to stories

- questioning children during a story, e.g., what will happen next? (sequence), what colour? (details);
- use of listening post, e.g., sequencing pictures, manipulating, painting, building, completing set activities;
- use of puppets, toys;
- use of stories with repetition.

Child can say at least one nursery rhyme

- teaching nursery rhymes, e.g., Hickory Dickory Dock, I Never Saw a Purple Cow.

Child reads by way of pictures and discusses

- picture talks;
- teacher discussion about books in library corner.

2. Left to Right Progression

Can move left to right across a page using finger

- teacher indicates on page where to begin;
- copying names under supervision;
- teacher's directions and questioning while reading;
- writing patterns and stencilled material, e.g., dog running to bone.

Can turn pages starting at the beginning of the book

- supervision and directions from teacher while children are using books.

3. Auditory Discrimination

Child can complete a rhyming sequence
e.g., dan fan man tan ___ ___, etc.

- reading and discussing Dr Seuss books;
- oral games.

Can imitate sounds made by the teacher, e.g., animal sounds

- oral games, e.g., farm animals;

Can distinguish between loud and soft, high and low sounds

- use of piano, children move accordingly, e.g., sit for soft, stand for loud;
- children make loud/soft/high/low with voice, feet, musical instruments.

Can recognise individual children's voices

- Games, e.g., "Hello judge";
- use of cassette to record individual voices.

Can select objects, the names of which have common initial sounds

- games, e.g., select the object starting with "s" and "I spy".

Following oral directions in correct sequence

- games, listening post, records.

Memorising the sound each letter makes

e.g., point to the letter that makes a 'b' sound.

4. Visual Discrimination

Can classify

- sorting beads, pebbles, shells, etc. into colour, or size or type of function;
- colour matching activities, e.g., pattern games.

Can recognise name cards

- places coat into right cubicle;
- finding name cards.

Can find in class books, notices, name cards, words or letters that are the same

- story charts and nursery rhyme charts matching flashcard word or phrase.

Can distinguish between shapes

- use of flashcards;
- matching shape games;
- use of shape boards;
- use of multi-attribute blocks;
- returning blocks to correct area.

5. Kinaesthetic Discrimination

Can trace simple outlines with finger or pencil

- stencils with dotted lines to join up;
- tracing templets of animals, etc.

Can trace letters, shapes in the air and on the table

- finger painting, sand play, finger plays.

Can recognise through touch similarities and differences in shape, size and texture, etc.

- feeling boxes, games involving matching through feel, posting box;
- multi-attribute blocks;
- rods - feeling differences in size.

6. Vocabulary

Can call familiar objects by their correct name

- "I Spy" game
- picture talks
- object talks
- health and safety talks
- stories and poetry
- drama and puppetry
- excursions
- news
- films

Can distinguish "behind", "in front", "first" and "last".

- follow the leader;
- directed activities, e.g., put the car behind the house;
- incidental classroom organisation, e.g., 'The first person ready can ...';
- racing games.

Can talk about his possessions and work

- remind children to bring in toys, books, etc., and to talk about them;
- news times;
- children tell each other about their paintings, models, etc.

Can tell a story

- ask children questions in story time;
- use puppets to act out a story;
- sequence of pictures and children describe a story.

7. Comprehension

Can select details from a story

- questioning, e.g., "what colour is Red Riding Hood's dress?"

Can relate experiences from a story or own background

- news;
- open-ended stories "what would you do if ...?";
- informal conversation with teacher and other children.

II PRE-NUMBER PROGRAM - OBJECTIVES

1. Classification of intensive properties

e.g. size

- using phrases such as the big apple, the little orange (thick, thin, large, small)

- "tell me something you saw on the way to school which you think is big"

- "bring me something in the room you think is small"

- sorting sets of objects into big/small etc (e.g. big beads and little beads)

e.g. length

- examples in reply to requests e.g. as above (vocab.: long,short)

e.g. volume

- recognising aspects of volume and using a-propriate vocab. (full, empty)

- collecting and sorting as for size

- comparing vol. of containers with same shape but different sizes

e.g. height

- examples in reply to requests 'as above' vocab; tall, short, high, low

e.g. mass (weight)

- recognising aspects of mass and using appropriate vocab (heavy, light)

- collecting and sorting as for "size"

e.g. time

- understanding and use of "yesterday" "today" "tomorrow" "day" "night", times of the day.

e.g. money

- value of coins (cents in particular)

e.g. shape

- use of jigsaws templets

- recognition and sorting of triangles squares and circles

2. Seriation (order)

- teaching of perceptual discrimination and the words that describe the difference - big, little; big, bigger, biggest

e.g. size

- grading a set of objects according to size e.g. giving the largest toy to the smallest child.

e.g. length

- vocab; long, longer, longest

e.g. volume

- does this bottle hold more than that one?

- looking at empty containers - which one would hold the most.

e.g. height

tall, taller, tallest	high, higher, highest
short, shorter, shortest	low, lower, lowest

e.g. mass

heavy, heavier, heaviest	light, lighter, lightest

e.g. time

- yesterday, today and tomorrow; do you come to school before lunch?

e.g. money

- placing money in order of value

3. Spatial Relationship

- emphasise such terms as "over, under, in, out, in front of, above, below, up, high, low, down, inside, outside, first one, middle one.

4. Numeration

- ability to count to 10 (rote)
- ability to abstract numbers from cards
- ability to make judgments about - more, less, few, lot, etc
- ability to recognise and match the primary and secondary colours

III PRE-WRITING PROGRAM - OBJECTIVES

1. Provide activities which develop muscular co-ordination, tactile and manipulative skill through -

- real life activities, e.g. tying shoe laces, buttoning clothes, playing in the house corner, care of classroom equipment, construction toys, sand play, water play and bead threading
- artwork e.g. modelling using clay, dough, plasticine, drawing on blackboard with chalks, with crayons on large sheets of paper, painting using large brushes, finger painting
- handwork e.g. paper tearing, twisting, crumpling, cutting, rolling and folding
- finger plays, songs and rhymes
- physical education e.g. ball catching.

2. Provide activities which develop visual discrimination

- jig-saw puzzles
- sorting and matching beads etc. for size and shape
- pattern making with blocks, beads, coloured sticks, rods etc.
- picture sequence reading to give left-to-right progression
- reading name cards

3. Provide specific writing and pattern activities in a developmental sequence

- free scribble on blackboard with chalk and on large sheets of paper with crayons, large coloured pencils, textas.
- directed scribble using free hand and finger movement on blackboards or paper, or using chalks, crayons, large pencils, textas., or large brushes
- directed patterns using straight lines, circles and parts of circles
- variations of directed patterns, combining shapes already used
- picture making from patterns
- tracing over words with fingers
- copying of a set example

IV. MUSIC AND MOVEMENT PROGRAM - OBJECTIVES (BEHAVIOURIST)

1. Children will participate in songs

   - finger plays
   - nursery rhymes
   - simple songs

2. Participation in singing games

   - e.g. "Did you ever see a Lassie?"

3. Recognition of rhythms for basic steps and move to the music

   - walking
   - marching
   - skipping
   - running
   - galloping

4. Can respond to a regular beat and move accordingly, eg.

   - clapping
   - tapping
   - playing regular beats with percussion instruments

5. Responds to changes in music through movement

   - loud and soft music
   - slow moderate fast music
   - smooth and jerky music
   - music suggesting feelings e.g. happy, sad, light, heavy
   - music suggesting animals, particular actions (playing, shopping, working, etc.)

6. Responds to listening activities

   - moves freely to musical piece

7. Children use percussion instruments holding them correctly, using for self-expression or accompanying a particular rhythm.

   - children use instruments in free play
   - use particular instruments to accompany piano, record, etc.
   - learning to play softly and loudly

V. ART & CRAFT PROGRAM - OBJECTIVES

1. Children are given the opportunity to use a wide variety of materials freely, and allowed to develop at their own pace
   - materials for painting, drawing, pasting, modelling, constructing, cutting, printing are made available to children to use (as they wish) to create their own works.

2. Children have practice in mastering a variety of manipulative skills

   - cutting activities
   - pasting activities
   - tearing activities
   - rolling activities
   - crumpling activities
   - sewing activities
   - woodwork activities
   - cooking activities
   - fringing activities

VI. PLAY PROGRAM-OBJECTIVES

Children use play equipment and materials for the purposes of interacting with other children, enjoyment, and incidental learning about their environment.

- blocks
- construction equipment
- puzzles
- house corner
- sand, seed and water play

VII. SOCIAL OBJECTIVES OF THE BEHAVIOURIST MODEL (BEHAVIOURIST)

A. THE CHILD

1. Follows direction

- walks in classroom
- puts back toys where and as he found them

2. Observes classroom procedures

- respects " quiet" corners
- stays in view of the teacher
- observes the limit to the number of children playing in a certain area

3. Responsible

- uses "please", "thank you", "sorry" and "excuse me"
- accepts responsibility for own actions
- uses materials correctly, e.g. hammers are used only for hammering nails, sand remains in sandpit
- takes care of books e.g. by turning pages carefully, reading books in book area

4. Comfort in school

- happy
- can control temper
- when frustrated can a) persist with task
  b) recover quickly
  c) adjust to change

5. Achievement motivation and pride of mastery

- alert, interested, attentive, e.g. asks questions, explores objects in his environment
- follows activities to conclusion
- uses materials in a variety of ways
- seeks help only when necessary
- tackles new tasks
- satisfied with own work
- brings his treasures to school

6. Care of self

- cares for coat, towel, etc. e.g. by hanging them in locker, folding towel neatly
- uses toilet when necessary, pushes button, washes and dries hands
- brings handkerchief to school
- can take off shoes and socks
- can put on shoes and socks
- wears smock for painting, water play, etc.
- knows age
- remembers to take own belongings home.

B. OTHER CHILDREN

1. Interaction

- allows children to play with toys
- remembers to wait turn
- speaks in turn
- addresses people by their name
- liked by other children
- plays in group games
- helps other children

C. THE TEACHER

- at 'signal' from teacher comes together with the group
- child asks teacher to write name on painting
- when a mess is made or something is broken child informs teacher
- child responds to praise
- child responds to parents' and teachers' requests
- remembers and acts on guidance
- offers to do odd jobs
- initiates interaction with teacher

VIII BEHAVIOURIST LIBRARY PROGRAM - OBJECTIVES

1. Take care in handling books

- discussion on care of books
- teacher shows by example how to care for books when reading

2. Able to classify books according to size, thickness, subject matter, etc.

- bead and object sorting
- colour and specific toy, tables

3. Children are able to choose a book and follow it from beginning to end

- sequence pictures
- bead threading
- nursery rhyme picture charts
- matching games (from left to right)

IX SCIENCE PROGRAM - OBJECTIVES

1. To expose children to scientific objects e.g. plants and pets

- filmstrips of plants growing, zoo animals, etc.
- books and pictures on plants and animals
- daily feeding of and cleaning animals
- daily watering and caring for plants
- discussions on what will happen if we neglect them
- children bring own animals (or pictures) and plants

2. To teach specific facts - observation of the environment

- daily and weekly weather charts
- nature table
- incidental questioning e.g. "Where does rain come from?"
- dressing dolls according to weather
- art/craft activities e.g. leaf stencils
- nature rambles and excursions
- filmstrips and discussions on other environments

X PHYSICAL EDUCATION - OBJECTIVES

The development of perceptual-motor abilities which will enable the child to do with his muscles what he wants and intends to do.

1. Gross motor co-ordination

- the ability to walk on a balance board, to jump, to climb, to throw, and catch a ball.

2. Participation in group play

- children can follow instructions
- children can join in willingly

XI HEALTH AND SAFETY PROGRAM - OBJECTIVES

1. Awareness of and attention to bodily needs

- incidental discussions on personal hygiene
- reading and discussing books about health e.g. dentist, doctor books
- filmstrips e.g. At the Dentist
- object talks e.g. toothbrush, shampoo

2. Safety at school

- incidental discussions on personal safety
- knowledge and practise of safety rules
- road safety calendar
- completing stories on safety at school

APPENDIX B

Example 'A' of Weekly Planning in the Pre-School

Pre-numbers:

1. Can classify properties by length, e.g. cat pictures to which pupils are to attach the stated whiskers such as long whiskers; tails are pinned daily to coloured cats and dogs (as above); compare lengths of footsteps, arms, etcetera; collect one long and one short leaf each to paste on painted tree; compare lengths of animals made from dough.

2. Can recognise the colour 'green'; daily incidental references to colour in pictures, clothing, toys, paint, dough, art/craft media and finished product.

3. Can use the terms: "over" and "under"; following directions with outdoor equipment and with incidental activities, e.g. "put the chair under the table"; attaching pictures of animals to objects e.g. "the dog under the gate".

Pre-reading:

1. Can discuss pictures.

2. Can recognise sounds; tapes of dog panting, whining, scratching, barking; jars of stones, sticks, leaves, etc.

3. Can call objects by their correct name: table display of animal items, e.g. leash, pellets, etc. These are used for discussion and touching games.

4. Can listen attentively to stories: "All About Dogs"; "The Pokey Little Puppy"; "He's Your Dog Charlie Brown.

Pre-Writing:

1. Can sit squarely at a table.

2. Can develop small muscle skills: sorting pellets, matching cards on boards, associating pictures, plastic and wooden construction sets, threading, grading, stacking, art and craft work.

3. Can tear and cut: see Art and Craft section.

4. Can develop large muscle skills: ropes, climbing equipment, wheel toys and blocks.

Social Awareness:

1. Brings toys and pictures to school.

2. Can help other children by responding to a teacher's request.

3. Initiates interaction with teacher to discuss home life.

4. Puts toys back where and how they should be through own initiative.

5. Listens to others during picture and news talk.

Science:

Water looks clear - try to dissolve salt, sand, sauce, cocoa.
Do these change the taste?

Health:

Use of the nailbrush with soap and water daily to clean toes, fingers knees and nails.

Example 'B' of Weekly Planning in the Pre-School

Art/Craft:

Related to birds and fish: to experience a variety of media-eggshell, fish, frieze of under the sea, fringing feathers, pasting feathers, leaves and ferns for bird mobile, using feathers for Indian headband, silhouette of houses washed to give "foggy" effect. Chalk painting, hand painting, free painting, mixing blue and yellow.

Health and Safety:

Use of the hairbrush - brush hair at least twice daily. Shampoo hair regularly and keep it tidy.

Singing Game: "Pigeon House".

Pre-Number:

Can recognise the colours blue, yellow, green: playing the fishing game; daily incidental references to colour of clothing; paint dough discussion of pictures, books, classroom equipment and art/craft exhibits; discussion of constructions, matching pictures; sorting of buttons, discs, etc; threading beads.

Can classify properties by "heavy", "light" - comparing weights on scales using tiles, cork, crayon and paper; comparing pupils own weights. Science table of containers of various weights, objects of similar size but different weights; floating and sinking objects in water tray.

Pre-Reading:

Can listen attentively to stories: Animal Doctors, Animal Book. How does it feel?, Birds on a Bough, The Ugly Duckling, How Animals Sleep.

Can discuss pictures - naming objects and relating to pupils' homelife House Pets, Cats Playing, Feeding the Parrot, The Canary, The Goldfish.

Can talk about possessions and work - through news show and tell, construction, creative activities.

Can recognise shapes - can identify pet shapes, zoo animals, felt animals templates.

Pre-Writing:

Can position paper correctly - jig-saws, books, sorting and matching games. Practise the use of small muscle skills - sorting animal toys from other toys, matching one animal to others of its kind; threading beads, seeds, straws, construction straws, rosettes, blocks.

Practise the use of large muscle skills - balancing, throwing and catching bean bags, climbing frame, ropes and ladders; bird seed and shavings play, construction, digging etcetera.

Can free tear and free cut - see Art/craft section.

Parental Involvement

Although parents were enthusiastic initially, over the school year there was a steady decline in the attendance of parents in the preschool.The mothers who were consistent with their support and help expressed satisfaction in being involved. The use of the toy library proved popular with the parents. This service was fully operated and maintained by the parents after being initiated by the teachers. In 1977, the preschool will persist with its invitation to parents to share in the activities that have been planned such as film days, displays and meetings, etc.

Difficulties

Most of the difficulties that had occurred during the year were resolved through discussion and mutual support. The role of the program assistant in encouraging the teachers when they felt discouraged was especially important.
Problems which arose during the first part of the year generally focussed on personality factors. The teachers found it difficult to work and plan in a team teaching situation as both had had no previous experience of such a situation. The necessity for teachers to have similar personalities and teaching styles if they are to work harmoniously in a team situation or who are prepared to appreciate and tolerate differing viewpoints, cannot be overstressed. Especially is this so in a program which stresses a prescriptive teaching style.

Minor problems caused by the relative physical isolation of the preschool have arisen but these have in due course been resolved.

It will be important to see how permanent are the program characteristics when the program assistant's direct support is gradually withdrawn in 1977.

APPENDIX C

SCREENING TEST FOR BEHAVIOURIST PROGRAM

(Criterion: 100% mastery)

Name: .....

		Yes	No
D.	Pre-Reading		
1.	Literary Appreciation		
	A. Teacher reads story, e.g. "Goldilocks" and asks the following e.g. 4 questions showing that the children know -		
	i) sequence of events ii) knowledge of story		
	B. Teacher asks child to say any nursery rhyme of their choice.		
2.	Left to Right Progression		
	A. Teacher hands child book and asks child to turn the pages and tell the story. Teacher checks for -		
	i) looks at left page before right ii) turns pages from beginning of book to end.		
	B. Teacher gives child five red counters and a card to match these counters. Teacher asks child to put the counters on the card. Teacher checks pattern of matching. Mastery is left to right.		
3.	Auditory Discrimination		
	A. Child can reproduce simple sounds made by the examiner "Here is a word game. I will say two words and I want you to tell me what the two words I say are."		
	i) moo moo ii) chug chug iii) blup blup iv) eek eek		
	The child must reproduce all four pairs for mastery.		
	B. Child can follow simple directions. Teacher tells child to -		
	i) close the door ii) sit in the chair iii) put your hands on your head iv) look at the lights v) close your eyes.		
	Child must do all five activities to demonstrate mastery.		
	C. Child can follow oral direction in correct sequence. Teacher tells child to "Pick up the pencil off the floor, put it on the desk and sit down".		

	Yes	No
4. Discrimination		
A. Child can separate a collection of 6 shells from a collection of 6 beads. Shells and beads are mixed together. Child separates into two piles: a set of beads and a set of shells. Teacher says: "Can you put the shells in one pile and the beads in one pile?" Child has to separate materials correctly.		
B. Child can separate six red beads from six blue beads. Beads are mixed together. Teacher says "Can you put the red beads in one pile and the blue beads in one pile? Criterion of mastery: Child has to make two piles correctly.		
C. Child can match shapes to shape board. Child is to place six different shapes onto appropriate pegs. Teacher says "Can you find where this shape goes?", Child has to place all six shapes correctly.		
D. Child can match his given name card to his name on the board. Teacher has ten names on board including child's. Teacher hands child his name card and says "Can you find this name on the board?" Child has to match card with correct name.		
E. Child can trace around a circle template using forefinger. Teacher places template on desk and says "Show me this finger" (indicating her forefinger) "Can you move your finger like this?". Teacher demonstrates and child imitates. Child has to follow shape closely.		
5. Vocabulary		
A. Child can name 8/10 pictures of objects, people, animals and places - Clock, chair, car, fireman, policeman, cow, horse, elephant, house, shop.		
B. Can distinguish "behind". Teacher says "put the car behind the house" (using toy models).		
C. Can distinguish "in front" (of). Teacher says "Put the car in front of the house". (using toy models).		
D. Child can distinguish "first" and "last". "Here is a row of soldiers marching to war (show direction they are going in), show me who is "first" and who is "last".		
E. Child can tell one sentence about what is happening in a presented picture. Teacher says "Can you tell me what is happening in this picture?"		
6. Comprehension		
A. (covered in literary appreciation question).		

Pre-Number	Yes	No
1. A. i) Child can name something "big" he can see in the room.		
ii) Child can name something "small" he can see in the room.		
iii) Child can grade a set of three toy cars from smallest to largest. "Can you put the cars in a line here, starting with the smallest and going to the largest?" Child must put all 3 in order correctly.		
2. Volume		
A. i) A child can fill a jug to the top. Teacher says "Can you make this jug full of water?"		
ii) Child can empty jug. Teacher says "Can you empty jug?"		
iii) Child can name the bottle (from 3 of graded sizes) that holds the most. Teacher says "Can you show me the bottle that has the most water?".		
3. Height		
A. Child can sort a set of 6 pictures into the "tall children" and the "short children". Teacher says: "Can you put all the tall children over here, and all the short children over there?".		
B. Child can arrange a set of three pictures in order of height. Teacher says: "Can you put the trees in a line, starting from the shortest to the tallest?".		
4.		
A. Child can separate a heavy box from a light box by feeling. Teacher says "Put one box in this hand (teacher indicates either hand) and the other box in this hand. Which box is heavy?'		
B. Child can arrange 3 school cases in order of mass. Teacher has placed a brick in one case, a book in the second case, nothing in the third. Teacher says "Will you hold the cases and then put them in a line from the lightest to the heaviest?".		
5. Time		
A. Child can name 2 actions associated with (i) days and (ii) night.		
i) Teacher says "how do you know when it is day time?"		
ii) Teacher says "how do you know when it is night time?"		
B. Child can associate actions with "before" and " "after".		
i) Teacher says "Do you come to school before lunch?"		
ii) Teacher says "Should you put your socks on after your shoes?"		

		Yes	No
6.	Money		
	A. Child can recognise the 1¢ coin as money and name its value.		
	i) Teacher says "do you know what this is?"		
	ii) How much is it?"		
	B. Child can place the 1¢, 2¢, 5¢, coins in order of value and state their value.		
	i) Teacher says "Tell me how much these are?"		
	ii) "Can you tell me which one would buy the most?"		
7.	Spatial Relationships		
	A. Child can make a toy man go "up" the steps and "down" the steps. Use blocks for steps. Teacher says -		
	i) Can you make the man go "up" the steps?		
	ii) Can you make the man go "down" the steps?		
	B. Child can make a toy man go "in" a house and come "out" of a house. Teacher says -		
	i) "Can you make the man go in the house?"		
	ii) "Can you make the man come "out" of the house?"		
	C. Child can make a toy car go "over" a bridge and "under" a bridge. Teacher says -		
	i) "Can you make the car go "over" the bridge?"		
	ii) "Can you make the car go "under" the bridge?"		
	D. Child can place hand "above" a table and "below" a table.		
	i) "Can you put your hand "above" the table?"		
	ii) "Can you put your hand "below" the table?"		
7.	Numeration		
	A. Child can count to 10. Teacher says "Can you count to 10 for me?"		
	B. Child can name beads with primary colours. Teacher holds up red , yellow, and blue beads and says "What colour is this?".		
	Child can name beads of the secondary colour. Teacher holds up beads of green, purple, brown and orange and says, "What colour is this?".		
	C. Child can abstract numbers 1-5 from set cards. Teacher holds up card with 1 circle and says "How many circles are there?" Do same with cards 1-5.		
	D. Child can make judgements about "more" or "less". Teacher places 2 piles of beads (1 with obviously more than the other) and says "Which has more?".		

F. Pre-Writing

	Yes	No
1. Muscular Co-ordination		
A. Child can button up a cardigan with 3 buttons. Teacher says "Can you do up all the buttons?"		
B. i) Child can make vertical lines in imitation. Teacher says "Can you make a fence with lines like this?"		
ii) Child can make horizontal lines in imitation. Teacher says "Can you make a road like mine?" Teacher draws _____ and child draws underneath.		
iii) Child can draw dots. Teacher says "Can you draw some dots on the paper?"		
iv) Child can draw a cross in imitation. Teacher makes cross and says "Can you draw a cross like mine?" (+).		
C. Child uses scissors to cut a fringe. Teacher says "Can you cut a fringe like this?" Teacher cuts paper.		
2. Visual Discrimination (covered in pre-reading)		
3. Writing and pattern activities		
i) Child can scribble with large arm movements on paper.		
ii) Other activities in section (1) (incorporating vertical horizontal and circular shapes).		

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DISCUSSION PAPER

PS 011449

The Curricula of the Behaviourist Program
- Kindergarten and Year One

J. Metham

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NUMBER 6

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Preface

This discussion paper summarises the teaching strategies and curriculum followed in the Kindergarten and Year One classes of the behaviourist program associated with the Mt Druitt Early Childhood Project. It complements the previously published discussion paper outlining the preschool curriculum of the same program. While some aspects of the formative and summative evaluation of this program are included in the following pages, the more comprehensive evaluation of the program will be detailed in subsequent publications.

John Metham as Program Assistant, had overall responsibility for the program.

The implementation of the program would not have been possible without the support and cooperation of the School Principal Dick McCauley, the Infants' Mistress Judy Watson, and the teachers Peggy Townsend, Jeanette Booth, Joyce Petty, Lyn Garland, Lois Fragar and Anna Breust.

Special thanks are extended to Judy Watson and her staff whose documents provided the basis for the program's curricular details.

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1. Overview

One of the Mt Druitt Early Childhood Project's overall goals was to provide the guidance necessary for the continuity of the five preschool programs through the first two years of formal schooling. This paper discusses the implementation of this goal with reference to the continuity of the behaviourist program at Whalan Infants School. The preschool aspects of the program's operation are detailed in an accompanying discussion paper: The Behaviourist Program in Preschool. In that paper a more extensive treatment of the program's principles are elaborated but for those who may not have read it, a brief overview follows.

The behaviourist program implemented at Whalan Preschool was based on a model developed by Bushell (1973) at Kansas.* The program closely followed the Bushell model but social praise was used as the reinforcer instead of a 'token economy'. Essentially, the program involved the systematic application of techniques derived from learning theory and empirical research findings, in order to change nominated observable behaviours. Formative evaluation was an integral part of the behaviour modification process and was constantly used to evaluate children's academic skills development. The curriculum was hierarchically structured in terms of difficulty and it was the teacher's task to provide appropriate learning experiences by constantly monitoring progress so that children mastered a given task before proceeding on to the next level of difficulty.

2. Program Objectives

The program had three basic groups whose behaviours were to be modified - children, teachers and parents. The following discussion elaborates on the objectives which the program had stipulated for each of these groups in Kindergarten and Year One classes.

Children: For Kindergarten children the program had the following objectives:

The development of the reading skills of visual discrimination and memory, auditory discrimination and memory, tactile discrimination, spatial relations, logical thinking, gross motor, fine motor, and hand-eye coordination as well as other specific stipulated skills.

The development of the number concepts of mass, size, length, position, conservation, capacity, time, money, shapes, and skill in the use of attribute blocks.

The development of the writing skills of posture, crayon/pencil grip, tracing, drawing, copying name and writing numerals 1-10 correctly.

For Year One children the program had the following objectives:

The development of the reading skills of structural analysis, word attack, phonic analysis, comprehension, dictionary use and library use.

The development of the number skills of numeration, number operation, application, practical number and sets.

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* Bushell, D. (1973) Classroom Behavior. New Jersey: Prentice Hall.

The development of the writing skills of forming all lower case letters and recognition of upper case letters

As well, the following three objectives were followed in all classes in school.

The development of pro-social skills which relate to interaction with peers and adults and those which relate to the use of materials.

The stimulation of creativity by participation in art, craft and music.

An expansion of the child's language knowledge (literature) and skills (spelling).

An expansion of the children's knowledge about the child's social and physical world with specific emphasis on health, safety and physical fitness.

Appendix A elaborates these objectives further.

Teachers: Essential to the implementation of the program was the teachers' abilities to use behaviourist strategies effectively in the classroom. The specific skills which teachers had to develop are listed in the Instructional Teaching Criteria Observation Form (see Appendix B). Teachers were required to make frequent contact with individual children who were on-task and to use social praise to reinforce such behaviours. Off-task behaviour was to be ignored and teacher disapproval was to be avoided.

The teacher's first task was to specify the final performances required to demonstrate the achievement of each child-centred objective and develop ways of evaluating them. Then the children's current level of performance on specific tasks was determined by pre-testing. Individual record cards were maintained and were used as the basis of planning. Both group and individual instruction were used when appropriate, for particular segments of work.

When it was not possible to ignore an inappropriate behaviour the teacher could resort to a "Time-Out" procedure in which all possibility of reinforcement was immediately removed.

The teachers' knowledge of the program's objectives and their skill in implementing the teaching strategies were crucial to the successful implementation of the program.

Parents: The program attempted to involve the parents in the education of their children by providing opportunities for them to share in the schooling process.

This was done by encouraging parents to become involved as -

Aide: To involve the parents in such ways as preparing materials at home; acting as a resource such as playing the piano; setting-up equipment; and domestic chores such as cleaning-up or clearing away.

Teacher: To have the parents act the role of teacher by supervising children in the playground; escorting children on excursions; reading stories and listening to children read.

Administrator: To invite the parents to make decisions on policy matters and to keep them informed about educational content.

Program Organisation

Once the teachers had detailed the objectives to be introduced over the year (see Appendix A), they then detailed the learning experiences designed to enable the children to master the specified tasks. An example of such planning is included as Appendix C.

To provide formative evaluation on the children's progress and to enable remedial steps to be performed when necessary, structured subject record cards were made for each subject area of the curriculum. On these cards the teachers indicated whether the objectives were suitable for group or individual treatment and the children's levels of performance on the various tasks.

The subject record cards also enabled the teachers to gauge the overall class performance and to determine how effectively each unit or theme accomplished its objectives. Further the card facilitated reporting back to parents on their children's progress. An example of such feedback to parents follows.

Reading: All children can recognise on sight the following words: big, little, mum, dad, boy, girl, is, cat, dog, the, my, I, baby, home, am, jump, can, yes, no, at, school, we, play. Once the children mastered these sight words they started on their Sentence Makers which is an introductory reading scheme.

Writing: The children have moved from tracing over their name to copying their name from a model. It is recommended that when at home the children be encouraged to do the same rather than attempting to write their name without a copy. At this stage, free writing without a model tends to lead to incorrect letter formation which causes problems with formal writing in Year One.

Number: A variety of skills has been set for the children to master in Number. The children have used a wide range of materials in free and guided play in order to develop such skills as the following:

i) Concepts: The children can use such terms as: heavy/light; sink/float (WEIGHT): big/little; tall/small; thick/thin (SIZE): long/short (LENGTH: over/under; in/on; high/low (POSITION): full/empty (CAPACITY).

ii) Time: The children can use such terms as morning, afternoon day, night. Also they can relate meal names to specific times of day (e.g., breakfast/morning).

iii) Money: The children can recognise 1c coins. To develop the children's ability in exchanging money, provision has been made for shopping experiences.

iv) **Shape:** The children can identify a square, an oblong, a triangle and a circle.

v) **Colour:** The children can identify red, yellow, blue, green, white, black.

vi) **Number:** The children have developed the concept of number up to seven. The listening post as well as the use of set work and number line activities have been found useful aids in assisting the children in this development.

Classroom Routine

In general, both Kindergarten and Year One classes tended to follow the same routine. Between 9.00 am and 11.00 am the teachers introduced the learning experiences drawn from the terminal objectives. Such lessons may have introduced, reviewed or drilled the appropriate topic. The group size varied from whole-class, through small groups to individual instruction.

Between 11.15 am and 12.30 pm different activity areas were set up. Some of these were compulsory for all children while others were free choice. Such activities included the listening-post, the shop, weighing, water-play, sentence-maker or painting. The nature of these activities was suggested by the goals stipulated for the week. Teacher and parents monitored the compulsory activities recording children's performance on the specific tasks. Between 1.30 to 2.30pm for Kindergarten and 3.00 pm for Year One activities drawn from the other subject areas such as Art, Craft, Physical Education, Social Science were introduced.

In both Kindergarten and Year One there were two teachers working in a team-teaching situation, resulting in a teacher-pupil ratio of one to thirty rather than the one to ten enjoyed in the preschool program. This led to greater press being placed on parental involvement. For the program to function optimally it was essential to reduce the adult-child ratio through parental involvement. Fortunately this was possible as parents willingly assisted in the classroom.

Social Reinforcement

In this program social praise was the reinforcement used unlike the 'token economy' featured in the Bushell (1973) model. The teachers relied entirely on the reinforcing value of adult approval and praise. A specific skill that the teachers had to develop was expertise in the use of descriptive praise. From general praise statements such as 'good' and 'nice', the use of such expressions such as "That's a colourful painting, Ann" or "I like the way you tidied up your mess, Muriel" needed to be developed. In the use of social praise reinforcement the child's name is used and the praise specifically identifies what behaviour the teacher found commendable.

Inappropriate Behaviour

The program sought the elimination of all harsh punishment and coercion in the classroom. Behaviour analysis techniques offer some basic procedures for altering behaviour in such a way that undesirable or problem behaviours are eliminated and appropriate behaviours strengthened without the use of severe punishment.

One strategy, provided it is applied consistently from the beginning, is to ignore unwanted classroom behaviour while giving immediate praise and attention for desirable behaviour. This strategy also requires the teacher to be alert for opportunities to reinforce appropriate behaviours.

There were some behaviours, however, which the teachers considered competed with effective learning and so could not be ignored. These were termed major misbehaviours and required teacher intervention. These occurred when the possibility of physical harm or damage to property was apparent. The teachers, at the beginning of each year, set down certain rules which were explained to the children. Prohibitions were placed on behaviours that could injure people or damage property. At the beginning of the first term these rules were introduced and emphasised. Any violation of these rules led to the immediate removal of all possibility of reinforcement. This procedure was termed 'Time-Out'.

For an example of Time-Out in operation consider the case of two boys fighting. The teacher intervenes and explains that they are breaking a rule. Without further comment the boys are seated some distance from the rest of the children. After a brief timed period (say three minutes) the teacher indicates to the boys that they may return to the group and that the instance is over. The entire sequence is carried out in a non-emotional, matter-of-fact way. A rule is broken and there is an immediate consequence of the withdrawal of reinforcement. The teacher does not scold, admonish or lecture The Time-Out procedure is precise and exactly timed to follow the rule violation.

Teacher Effectiveness

One of the critical defining features of the program was teacher behaviours. A range of criteria was set on which the teachers' behaviours were monitored (see Appendix B). For example, on inspection, it can be seen that no disapprovals were expected from the teachers while 100% contacts with the children had to contain praise. Rating of teacher behaviours using the Instructional Teaching Criteria Observation Form regularly indicated strengths, weaknesses and improvement in the required skills.

Teachers' classroom performances were constantly monitored using the above form and when necessary assistance provided to help teachers having specific difficulties with the specified behaviours. In fact the constant monitoring of teachers' classroom behaviours and associated discussions about problems and successes, were essential for the successful implementation of the program. The meetings also provided opportune times to discuss current research and evaluation issues. A copy of a background summary document used at one session is shown as Appendix D.

Involving Parents

The third major objective of the program centred on the involvement of parents in Kindergarten and Year One classes as aides, as teachers and as decision makers.

To foster parental involvement in the classroom, parents were asked to talk with and listen to children as they worked, read stories, help with art and music activities, take charge of activities such as supervising the climbing equipment or the painting area, assist during transition periods by supervising

the clean-up of one activity and helping to prepare for the next, help the children with individual tasks, assemble samples of children's work for display, prepare materials for class activities and collect materials at home.

To keep parents informed about program developments, continued use was made of Newsletters and Figure 1 shows an example of the type of feedback sent into the homes. Of special interest is the report made on the parent teacher meeting, its topic being the advantages and possible direction of parental and community involvement in schools. This meeting was the catalyst which led to the much wider conference being held in 1979 but at the schools' initiative rather than the Project's. It was significant that the need for community involvement in the schools was now being expressed by the schools.

As well, information on the behaviourist program specifically, and the Mt Druitt Early Childhood Project generally, was disseminated to parents, school staffs and other interested bodies. For example, the Kindergarten teachers prepared a black and white video showing the children at work in the program. The program assistant showed both the parents and the school staff the colour video which covers the Project's activities. A pamphlet was prepared for the parents which attempted to explain the program and a copy of this is included as Appendix C .

It can be seen that a variety of strategies were used to involve parents in the program.

EVALUATION

Evaluation of Child Centred Objectives Using Program Measures

Kindergarten

By the end of Kindergarten, the teachers evaluated the children in the areas of Reading, Writing and Number. Though other curricula were treated, it was in these areas that individual progress was monitored in detail and evaluated.

Figure 2 indicates the final assessment of the children's mastery of these skill areas.

It can be seen that in Reading, 93% of the children mastered the specified skills. The following examples illustrate some of these skills. One stated objective was that the children were expected to learn a basic sight vocabulary of 30 words. The group average for recognition of this list was 28 words. Another aim stated the children should be able to phonetically identify 16 sounds. The class average for this was 15. As well, it was anticipated that the children would be able to demonstrate their ability to construct sentences using simple punctuation. This objective was evaluated through the use of an individualised scheme. To begin this scheme a child required a 'bank' of 12 basic sight words. By November all the children were using the scheme and had extended their 'bank' to 39 words on average. These words were then used in creative writing lessons when the children constructed their own sentences. A few samples follow to illustrate these sentence structures and their punctuation:

I am playing at my big home with my friends.
is it my friends birthday party today?
am I going to a big birthday party?
we can see the children running at school.
my little baby is at home kissing my mum.

FIGURE 1 PARENTAL NEWSLETTER

Newsletter

SUMMARY OF DISCUSSION

ADVANTAGES

* CONFIDENCE & SECURITY
* INCREASE IN SKILLS

CHILDREN

A
BETTER
EDUCATION
THROUGH
WORKING TOGETHER

PARENTS

* FIRST HAND INFORMATION
* INSIGHT INTO CHILD DEVELOPMENT

TEACHERS

* COMMUNICATION
* EFFECTIVE TEACHING

It is through your involvement, your participation, in the school at all the various levels suggested that we will achieve the better education we want for our children. So, if you can, be in it!

Newsletter

September 1978

By the end of second term all the children in K1 and K2 had been checked in the skills taught during the year. We thought that you might be interested in seeing some results.

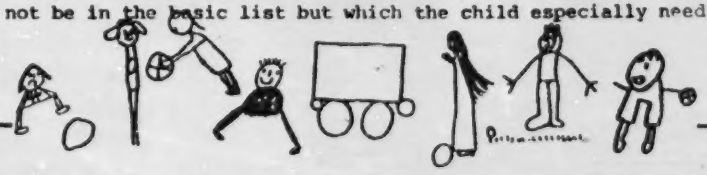
READING

Sight Words: The children have built-up a bank of words that they can recognise by sight. When checked all the children identified the following words:

big, little, my, is, home, I, am, baby, mum, dad, boy, girl, cat, dog, the, school, at, can, jump, no, yes, we, play, friend, run, skip, television and me. Fifty-three of the 54 children also knew: shop, love and look.

Third term should see this list added to through a wide range of activities that drill the words but in a play atmosphere rather than in a monotonous, boring fashion.

These words become the foundation for reading especially with the Sentence Makers that all the children now have. The children can make their own sentence by arranging the words they know in sensible patterns. The children are also permitted to request words that may not be in the basic list but which the child especially needs



to make the sentence. You can see that the opportunity is there for children to quickly expand their recognition of sight words and so develop a real mastery of the skill of reading.

Sounds: The children were introduced to different letter shapes and they have to be able to identify the sound the letter makes. The following is a list of the letters that have been introduced plus the number of children who knew the correct sound:

t(44), a(49), c(51), e(49), m(53), p(44), r(47), f(45), s(53).

NUMBER

Set work, number line activities and rote counting all contribute to the child's understanding of numbers. At the end of second term all the children could recognise these numbers - 1,2,3,4,5.

Following is a list of the remaining numbers to 10 and the number of children who could recognise them

6(52), 6(48), 7(49), 8(47), 9(44), 10(49).

The children also had practical number experiences in shopping, weighing, water play, shape work, and time concepts.

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Kindergarten 2 are working happily with their teacher, Miss Lyn Peterson. Lyn has been on the staff as a reserve teacher for some time and worked with Mrs Petty and Mrs Townsend before taking over Mrs Breust's class for the last 4 weeks of Term 2. Mrs Petty has very generously offered to come and help occasionally at activity time. Her term as casual teacher on K2 came to a close at the end of Term 2.

We're happy to report that Miss Booth's health continues to improve and she is at present staying with her parents, planning a trip overseas. On her return from her trip she hopes to be appointed to the South Coast.

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On Monday, July 24th, 1978 a meeting was held among the parents and teachers from Bidwill, Dawson, Madang Avenue, Mt. Druitt and Whalan Schools (plus other interested people) to consider the advantages and possible direction of parental and community involvement in schools. The main conclusion reached was that a better education could be provided by working together. A summary of the discussion is provided on the back page. In the light of this meeting, we continue to urge parents to take part in the classroom. Term Three is always our "hectic" term - many skills have to be tested and recorded so that the children may be assessed for Year 1, so please pop in to help whenever you can.

We also take this opportunity to thank those mothers already so actively involved.

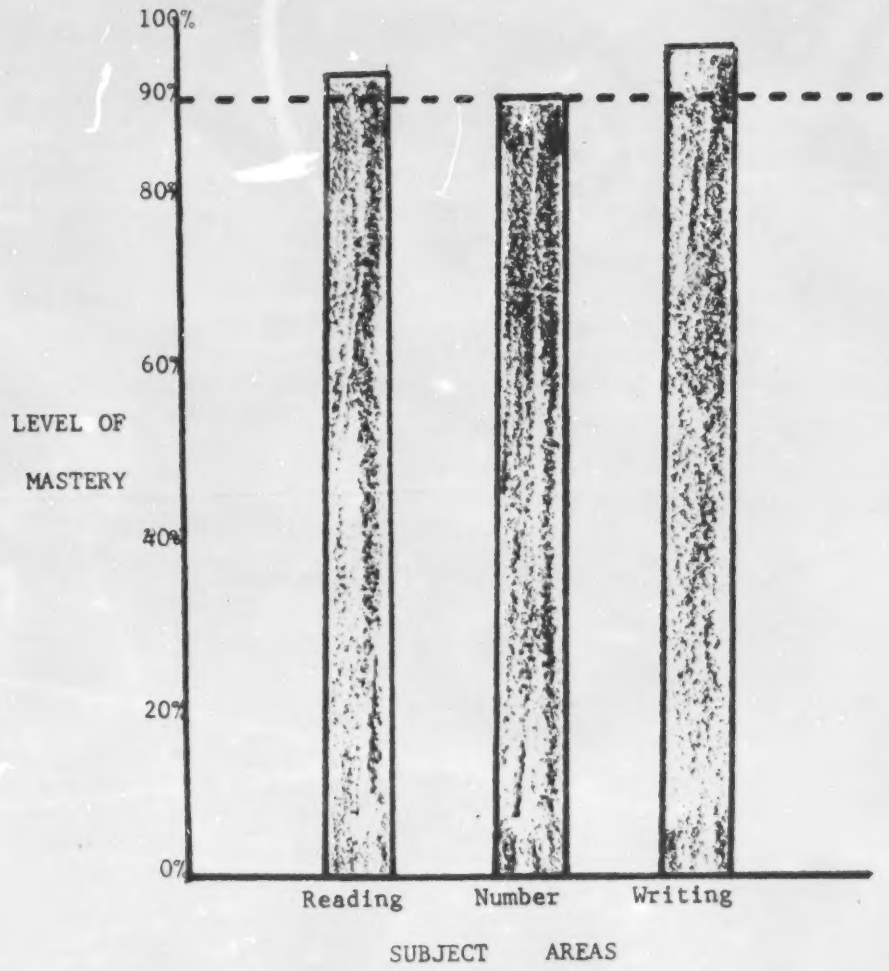

FIGURE 2 Percentage of Children Mastering Specified Areas

All children were able to construct simple sentences such as these and punctuate them appropriately with either a full stop or a question mark.

With Number, 90% of the children mastered the specified skills. An example of the topics covered in July is provided to illustrate the content areas the children were exploring. By July, the children had used a wide range of materials in free and guided play in order to develop such skills as the following:

a) MASS (heavy/light)
b) SIZE (big/little; thick/thin)
c) LENGTH (leng/short)
d) POSITION (in/out; over/under; high/low)
e) CAPACITY (full/empty)
f) TIME (morning, afternoon, night)
g) SHAPE (square, oblong, triangle, circle)
h) COLOUR (red, yellow, blue, green, white, black)
i) NUMBER (up to seven)

The listening post as well as the use of set work and number line were found useful aids in the development of these concepts. The children also had practical number experiences in shopping, weighing, water play, shape work and telling the time. In the final evaluation, the children were asked to attempt 20 different items drawn from number topics such as the above. The class average for this task was 18 out of the 20 items.

In Writing, 96% of the children mastered the specified skills. An example of the objectives stated in this area was that the children were expected to be able to recognise their own name in written form and also write it. All children, except two, demonstrated mastery of this skill.

The overall evaluation of these subjects indicated that the children successfully accomplished the set objectives. These results suggested that the behaviourist program effectively accomplished its specified behavioural objectives.

Year One

At the end of second term the teachers evaluated the children in Number, Reading Comprehension, Writing and Spelling. Figure 3 indicates the final assessment of the children's mastery in these skill areas.

It can be seen from Figure 3 that the class average for Number was 72%, for Reading 76%, for Writing 92% and for Spelling 80%.

There would seem to be at least one difficulty in the interpretation of these results. Since the children were working at their own various levels any general evaluation such as these tends to lower the class average. The assessment contained tasks which the teachers regarded desirable that all the children should have mastered by the end of second term. Since the children were working at their own mastery levels it is obvious that the assessment was biased against those children who were yet to master the terminal skills. Five children found the tasks too difficult and their results have lowered the class averages. With the exclusion of their results the class averages for Number, Reading and Spelling improved considerably. The conclusion reached was that, in general, the terminal tasks specified for mastery by the end of second term appeared appropriate for the children.

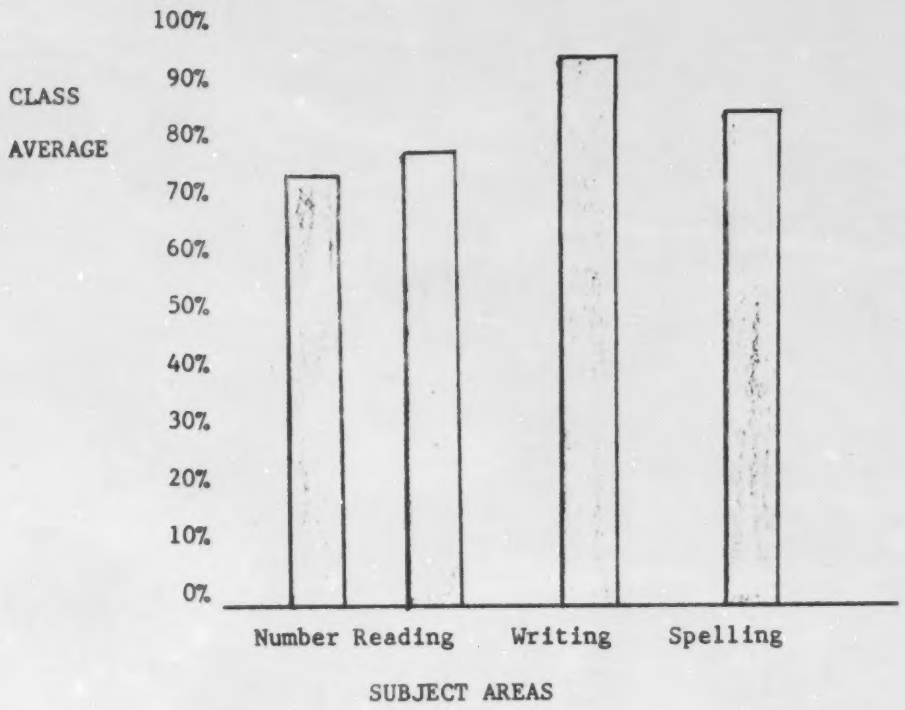

FIGURE 3 Percentage of Children in Year One Mastering Specified Areas

Teachers' Ratings of Kindergarten Children's Behaviour

A Project-wide teachers' rating scale was designed to gather information on the children's language, prosocial/aggressive, anxiety and achievement behaviours. The kindergarten teachers used this instrument to track change in children's behaviours over the year. Figure 4 illustrates the results of these ratings.

From Figure 4 it can be seen that the dimensions of language and achievement behaviours have all moved in the anticipated, that is favourable, direction. However, the Prosocial/aggressive dimensions and the anxiety dimension have moved in an unanticipated direction. The teachers rated the children as becoming more flustered in group situations; fighting more with other children; and needing more reassurance when attempting tasks. One interpretation made of this result was that anxiety and aggression increased when children moved from the relatively unstructured environment of the Preschool into the structured formal situation of Kindergarten. Perhaps the ratings also reflect the Kindergarten teachers felt the need for a more structured learning environment than found in the preschool situation. Whether or not this finding carries on into Year One was, at the time of writing, still to be determined.

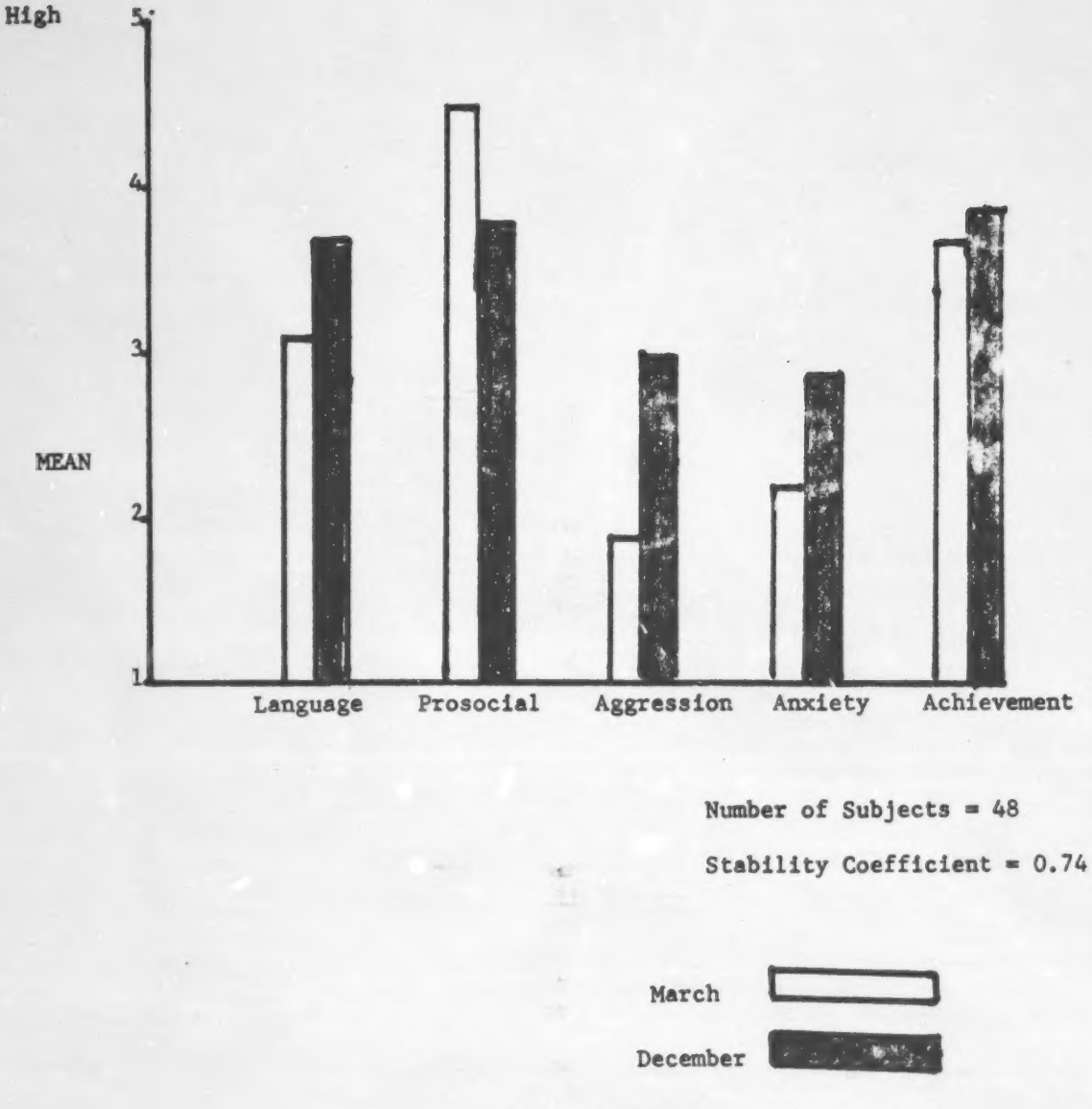

FIGURE 4 Comparison of Teachers' March and December 1978 Ratings in the Behaviourist Program

The same data were also used to compare 12 preschoolers' and 12 non-preschoolers' behaviours as rated by teachers at the end of Kindergarten. These results are included in Table 1.

TABLE 1 Comparison between 12 Preschoolers and 12 Nonpreschools by Means on Five Dimensions as Rated by Teachers at the end of Kindergarten

	Language	Prosocial	Aggression	Anxiety	Achievement
Preschoolers	3.43	4.54	1.88	2.14	4.33
Nonpreschoolers	3.29	4.21	2.04	2.44	3.85

They indicate that teachers, at the end of Kindergarten, rated the preschoolers as being superior in language and achievement behaviours while nonpreschoolers were rated as being more aggressive and more anxious.

Evaluation of Teacher-Centred Objectives

As well as evaluating the child-centred objectives, the teacher-centred objectives were also evaluated since they were regarded as one of the most critical defining features of the program. The Instructional Teaching Criteria Observation Form (see Appendix B) was used on 22 occasions over the Kindergarten year, each observational session lasting ten minutes and sampling various types of lessons. The results of this monitoring suggested that the teachers' behaviours met most of the prescribed criteria. Time-Out and Disapproval are not indicated because they were not observed by the monitor. Time-Out was not used simply because it was not needed. The teachers found that they were able to effectively manage minor misbehaviour by reinforcing children who were on-task. On each occasions when the teachers were monitored the minimum requirement of 80 percent of the children being on task was reached. Usually, over 90 percent of the children were on-task on average. The teachers made 100 percent contacts with children on-task. No percent disapprovals were made. However, the program also required 100 percent of these contacts to contain praise. The teachers manage- only 40 percent on average. There were two reasons for this low percentage. First, the percentage figure was lowered by the inclusion of the initial training session for each of the three new teachers who entered the program. The end of the year observational sessions indicated that the teachers were reaching a 70 percent level of praise utterances. However, even this was below the prescribed requirement. This leads to the second point. As was mentioned in the earlier discussion paper, the criterion level of 100 percent of contacts needing to contain praise led to a feeling of 'artificiality'. The 70 percent level gave an impression of 'naturalness' and fluency to the teachers' verbal responses. It is argued that this practice is still in keeping with learning theory. Rather than operating on a total reinforcement schedule the teachers operated on a partial reinforcement schedule. Research evidence indicates that such a schedule strengthens the 'rewarding' factor of praise. Teachers were able to increase or decrease the schedule according to the contingency of the situation.

During the Kindergarten year there was a staff turnover of three teachers for personal reasons. However, disruption to the Program was minimal because each new teacher was able to meet the program's teaching criteria requirements relatively quickly. The one requirement which appeared difficult for the teachers to implement effectively was the need for 90 percent of the contacts with prompts also to contain descriptive praise.

In Year One the Program did not experience the same turnover in staff with the two teachers, who worked in a team-teaching situation, staying with the Program for the year. In evaluating these two teachers, rather than aggregating the observation schedules over the year as was done in Kindergarten, a randomly scheduled sampling of the teachers' behaviours was conducted near the end of second term so as to indicate the teachers' functioning modes. Each teacher was observed for 10 minutes on six occasions and the results of this monitoring are detailed in Figure 5.

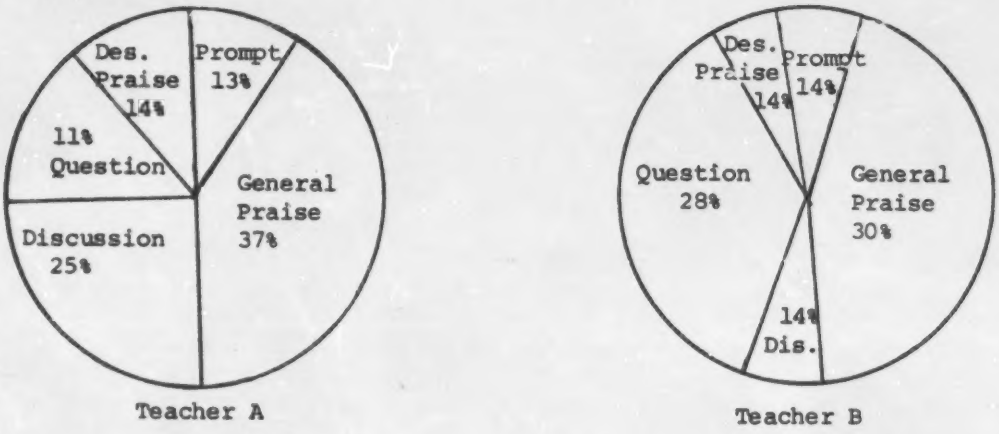

FIGURE 5 : Proportion of Teacher Verbal Utterances in Year One

On inspection of Figure 5 it can be seen that for Teacher 'A' 51 percent of the total utterances were reinforcement statements (General Praise plus Descriptive Praise) while for Teacher 'B' 44 percent of the total utterances were reinforcements. No disapprovals were observed nor was use made of Time-Out. The results also suggest that the lesson content has a bearing on the proportion of utterances made. For example, a Physical Education involving the introduction of a new skill may require a great deal of explanation and discussion whereas a further Physical Education lesson which aims to develop the same skill through practice and drill may lend itself more naturally to praise statements. The results, however, also reveal that the teachers did need to reverse the ratio of General Praise statements to Descriptive Praise statements. As in previous years, the development of fluency in the use of descriptive praise statements appeared particularly difficult to cultivate.

18. Evaluation of Parent Centred Objectives

Over the two years fifteen mothers became closely involved in Kindergarten and Year One. These parents interacted successfully with the children, shared in the team-teaching situation and helped to prepare materials. However, the teachers did express concern about the lack of involvement of the other families and various strategies were used to attract these parents to the classroom. Not only was parental involvement at the various levels of parent, aide and teacher moderately successful but the involvement of parents at the level of decision maker was put into effect. The two community meetings mentioned previously saw the realisation of parents actively expressing their opinions, values and needs.

Another source of parent evaluation was provided by a Project wide instrument which attempted to tap parent perceptions using an interview technique. The instrument had four sections focussing on:-

A. Communication between parents and schools;
B. Parents at school (involvement)
C. Parents' perceptions of programs (attitudes);
D. Parents as teachers (skills/styles).

The results of this interview for the Behaviourist Program follow.

A. Communication

The first section of the interview attempted to survey the communication system from parents' perspectives. A sample of the questions and responses follows:

		ANSWER	
QUESTION:	Do you get enough information about how your child is getting on at school?	not much some a lot	18.2% 9.1% 72.7%
QUESTION:	Do you get enough information about what your child is taught ?	not much some a lot	22.7% 31.8% 45.5%
QUESTION:	Do you get enough information about how your child is taught?	not much some a lot	18.2% 27.3% 45.5%
QUESTION:	Do you get enough information about what's happening at the school?	not much some a lot	18.2% 27.3% 45.5%

B. Involvement

The second section attempted to survey the context of involvement: attitudes, quality and quantity of involvement. A sample of the questions and responses follows:

		ANSWER	
QUESTION:	Do you get enough chance to talk to your child's teacher ?	not much some a lot	13.6% 13.6% 72.8%
QUESTION:	Do you get enough chance to participate in the classroom?	not much some a lot	27.3% 13.6% 59.1%
QUESTION:	Have you been personally invited to come to the school?	no yes	9.1% 90.9%
	a) How many times?	0 1 2 3-5	9.0% 18.2% 36.4% 36.4%

QUESTION: Have parents been invited to come to the school?	no	4.5%
	yes	95.5%
a) How many times?	0	4.5%
	1	13.6%
	2	31.8%
	3-5	27.3%
	6-10	9.1%
	10	13.6%

C. Perceptions

The third section attempted to track global perceptions of Programs degree of satisfaction, children's progress in basic content areas and behavioural style as well as classroom mileau. A sample of the questions and responses follows:

	ANSWER	
QUESTION: Are you happy about how your child is getting on at school?	not happy	0%
	happy	100%
QUESTION: Are you satisfied with how your child is progressing in these areas:		
a) reading	dissatisfied	4.5%
	satisfied	31.8%
	very satisfied	63.7%
b) number	dissatisfied	4.3%
	satisfied	27.3%
	very satisfied	68.4%
c) writing	dissatisfied	9.1%
	satisfied	36.4%
	very satisfied	54.5%

D. Parents as Teachers

The final section sought whether parents actively set about teaching certain skills or behaviours, how did they go about it and were they satisfied with the results.

Generally it would appear that the parents who had children involved in the behaviourist program considered that communication between the school and them was adequate, that the opportunity for involvement was adequate, and that they were satisfied with their child's progress.

20. The Program

Trained external observers, using a Project classroom observation instrument (Prose), tracked the interactions of twelve randomly selected children in the Program. From this process data the first group of interactions indicate the nature of the interaction between the teacher and the target child. In the behaviourist program, there was frequent positive and reinforcing interactions between teacher and children. Also no negative interactions were observed, indicating that the teachers were fulfilling one of the prescribed teaching criteria. The second group reveals the nature of the activity with which the target child is involved. In this program 63 per cent of all the activities observed were involved with academic skills subjects which is consistent with Program objectives. These results suggest that the Program was operating in accordance with its descriptors as observed by external observers.

21. Summation

The Behaviourist Program presents itself as a self contained evaluating package. It stipulates that educational objectives, whether they be child, teacher or parent centred, be behaviourally defined. By doing so, objectives are made accessible to measurement.

The Program was effective in achieving the stipulated child-centred objectives. Teachers found the Program relatively easy to implement and managed to meet most of the prescribed criteria. Descriptive praise appeared the most difficult skill to master. The teachers also expressed the view that the 100 percent praise and prompt pairing was artificial and recommended 70 percent as a more reasonable level.

Parents appeared to be satisfied with the Program and the objective of involving parents at the various levels was moderately successful. An impression gain was that the Program won acceptance from both teachers and parents because of its 'conventionality'. That is, where it is not too difficult to convince teachers and parents of the merits of having academic skills mastery as an educational objective, the development of creative potential or a healthy self-concept tend to be greeted somewhat dubiously.

In conclusion, the Behaviourist Program appears a viable model for a school to adopt should its objectives be compatible with desired school outcomes.

APPENDIX A

ELABORATION OF CHILD-CENTRED OBJECTIVES

KINDERGARTEN

For Kindergarten, broadly, there were three objectives: the development of mastery in the skills of reading, number and writing. The following is an elaboration of each of these objectives according to subject area.

READING:

This subject area was comprised of the following skills:

1. Visual discrimination and memory;
2. Auditory discrimination and memory;
3. Kinaesthetic skills;
4. Hand-eye coordination;
5. Gross Motor skills;
6. Fine Motor skills;
7. Tactile discrimination;
8. Spatial relations;
9. Logical thinking skills.

Visual Discrimination

As visual readiness normally precedes auditory readiness, it is usual to commence these skills fairly early in the Kindergarten reading program. Skills included in this area were :

- Recognising colours and shapes and matching accordingly;
- Recognising differences in size, shape or colour;
- Recognising differences in shades of colour; light, lighter, dark, darker;
- Sorting objects into common groups: beads, buttons, shells, etc.
- Discovering and describing the relationships between objects; e.g. cup to saucer; car to garage, etc:
- Associating printed symbols with specific situations;
- Selecting pictures and objects representing the spoken word;

- Arranging pictures in sequence;
- Phrase matching nursery rhymes and reading action commands;
- Discovering and describing likenesses and differences in detail, sequence, pattern and missing parts;
- Completing jigsaws;

and Memory

- Verbal recall of prior visual experiences;
- Recalling a correct verbal sequence;
- Reproducing a pattern in correct sequence;
- Initiating an action through visual cues.

Auditory Discrimination and Memory

- Identify source of specific sounds;
- Describe characteristics of specific sounds;
- Distinguish specific sound among others;
- Signify when one sound changes to another;
- Identify words that rhyme;
- Produce words that rhyme
- Reproduce simple rhythmic patterns with tapping, clapping and use of percussion instruments;
- Recall in correct sequence information received through auditory cues; and
- Following simple directions.

Kinaesthetic Skills

- Moving the body rhythmically;
- Using muscles to perform physical tasks;
- Manipulating the body in various directions.

Hand-eye Coordination

- Threading, lacing, doing up and undoing zippers, buttons, press studs, unscrewing, modelling painting and hammering.
- Tracing around simple templates with finger, crayon;
- Tracing over dotted line with finger, crayon;
- Sand tracing and modelling of letters and numerals;
- Copying regular and irregular sequences and patterns such as bead threading, blocks, counters, attribute shapes, sticks, peg-board, pcitures;
- Drawing and moving objects between given curved and straight lines;
- Cutting and tearing along lines; and
- Drawing straight lines both horizontal and vertical.

Gross Motor Skills

- Free walking forwards, backwards, sideways in a coordinated manner;
- Rolling in a controlled manner;
- Completing a simple obstacle course by walking, running, crawling;
- Throwing and rolling a ball at a target or to a person;

- Jumping over simple obstacles such as a rope or chalk line;
- Free skipping in a coordinated manner
- Walking forwards, backwards along a line while maintaining balance;
- Walking with a bean bag or balance basket on head;
- Jumping up and down over small objects lifting both feet simultaneously;
- Hopping on alternate feet;
- Hopping, walking, running, skipping, jumping according to directions;
- Pivoting on either feet;
- Catching a ball, bean bag with both hands;
- Sitting up from supine position; and
- Standing up from sitting position.

Fine Motor Skills

- Folding along lines
- Cutting paper, plasticene into required number of pieces;
- Cutting along, straight, curved lines;
- Copying form or pattern by reproducing patterns with beads, pegs, pipe cleaners, matches, attribute blocks, etc.;
- Copying form or pattern by tracing letter, numeral outlines, feet, hands.
- Manipulating puzzle pieces successfully;
- Completing geometric shapes and pictures of familiar objects;
- Writing letters legibly.

Tactile Discrimination

- Identifying objects by touch;
- Matching and pairing objects by touch;
- Discriminating between textures;
- Identifying objects identical in size and shape but different in weight;
- Detecting by touch differences in size; shape, texture and weight;
- Feeling and identifying contents of a 'surprise parcel';
- Playing with structural materials.

Spatial Relations

- Locating and moving parts of the body;
- Moving around and through objects in the spatial environment;
- Demonstrate knowledge of such conceptsas; near/far; up/down; in/out; right/left; forward/backward; before/behind; above/below; over/under; high/low; inside/outside; in front of; beside; between; on; out; through; around;
- Describe objects in terms of these concepts; e.g. put a red block on a blue block; a triangle next to a circle;
- Recalling position of objects in the room from memory
- Identifying right and left sides of body; and
- Making structures.

Logical Thinking Skills

- Recognising objects that belong to the same class or set;
- Recognising objects with a similar function;
- Recognising part - whole relationships;
- Recognising words or objects as opposites.

In addition to all these objectives, by the end of Kindergarten the children will have learned:

- a basic sight vocabulary (see Appendix E);
- to recognise own name in written form and write it;
- to distinguish between actual objects and pictures of objects;
- to answer in a complete sentence;
- to use simple punctuation;
- to participate in group story making;
- basic reading mechanics of left to right eye progression, top to bottom and beginning to end;
- to handle books carefully;
- to connect meaning of words and phrases with printed symbols and call familiar objects by correct name;
- to retell a familiar story; and
- to share reading experiences.

NUMBER: This subject area covered the following topics:

1. Mass
2. Size
3. Length
4. Position
5. Conservation
6. Capacity
7. Time
8. Coins
9. Shapes
10. Attribute Blocks

Mass

The children can

- use mass terms in single, comparative and superlative forms in pictorial representation e.g. circle the light objects; and
- trace around words heavy/light.

Size

The children can

- use size terms in single, comparative and superlative forms in pictorial representation e.g. put a box around the tallest flower; and
- trace around tall/small words.

Length

The children can

- use length vocabulary words in pictorial representation e.g. colour the balloon with the longest string.

Position

The children can

- use terms back of, behind, in front of, between, by, beside, near, in middle of e.g. "What toy is in front of the box?" and
- are familiar with terms right and left in relation to hands and feet.

Conservation

The consolidation of vocabulary concepts to develop conservation awareness through simple experiments: e.g. freeze specific amount of water into ice-cubes, then melt. Is there still the same amount of water?

Capacity

The consolidation of vocabulary concepts through extended experiences outside classroom environment e.g. Where do we find water? (dam, river, lake, ocean, swimming pool).

Time

The children can

- relate a specific time to a particular event e.g. school begins at 9 o'clock and finishes at 3 o'clock;
- count around the clock; and
- recognise o'clock on a clock face.

Coins

The children can

- recognise 20c coin and name native animal on it; and
- demonstrate a simple understanding of the purpose of money e.g. what can we buy from the canteen with 20c?

Shapes

The children can

- recognise name cards for four basic shapes;
- match names and shapes;
- halve basic shapes by folding and cutting (relate to conservation concept by placing halves together to make original shape) and
- make specific shape pictures given shapes.

Attribute Blocks

The children can

- recognise the four properties size, shape, colour and thickness;
- follow three consecutive orders such as "Bring me a large red triangle." and
- find blocks with one or two differences.

WRITING:

- Children have developed correct posture.
- Children use correct crayon/pencil grip.
- Children can trace around simple objects with finger/crayon/pencil.
- Children can draw between straight and curved lines.
- Children can copy own name.
- Children can write numerals one to ten correctly

YEAR ONE

For Year One, broadly, there were four objectives: the development of mastery in the skills of reading, number, writing and language.
The following is an elaboration of each of these objectives according to subject area.

READING: This subject covered the following areas:

1. Word Attack skills;
2. Phonic Analysis;
3. Structural Analysis;
4. Comprehension;
5. Dictionary Use; and
6. Library.

Word Attack Skills

The children should be able to

- Recognise whole words using picture clues;
- Identify a familiar part in a longer word;
- Use configuration clues;
- Detect a peculiarity within a word; and
- Use context clues such as associating accompanying illustrations to the passage or the position of a word within a sentence.
- Recognise words taken from the Dolch Basic Word List (see Appendix F).

Phonic Analysis (A Phonics Checklist will be found in Appendix G)

The children should be able to

- Detect if two or more words begin or end with the same sound;
- Listen to a word and supply others beginning with the same sound;
- Detect word differences with a common sound e.g. track, truck;
- Collect rhyming words to make word families;
- Detect similarity, differences in medial vowels e.g. ran, run;
- Combine blends to form a whole word; and
- Substitute beginning or final consonants to make new words e.g. rat, bat, bag, rag, ran etc.

Structural Analysis

The children should be able to

- Combine two or three syllable words into longer words;
- Determine whether vowel sounds are long or short;
- Detect common word endings such as es, ed, ly and ing.
- Combine known words to form new words e.g. fire light, play ground; and
- Discover smaller compound combinations such as into, upon.

Comprehension

The children should be able to

- read to discover specific facts;
- read to follow sequence of events within a story.
- read and recall main idea presented;
- read and anticipate outcomes;
- draw simple inferences from a story;
- relate what is read to one's own experiences and knowledge;
- list characters within a story;
- follow and carry out instructions or directions;
- speculate on story content giving a title and/or illustration;
- interpret a sequential picture story; and
- read and react to the mood of a story.

Dictionary Use

There are many types of simple dictionaries which can be used within the classroom: dictionary boxes, alphabet sheets, topical word dictionaries, picture dictionaries and personal dictionaries. All of these aim to develop proficiency with alphabetical awareness and also ability in word finding.

Library

Library skills embrace such areas as:

- Learning to handle and care for books correctly;
- Describing the nature of books i.e. their size, shape, illustrations, print and variety of contents;
- Using the resources within the library and employing this skill in simple research; and
- Developing ability to use the card catalogue system in the borrowing and finding of books.

NUMBER: This subject area covered the following areas:

Numeration;
Number Operations;
Application;
Sets; and
Practical Number.

Numeration

- Counting by ones to and from a given number;
- Counting by ones to and from 20;
- Counting by two to and from 20;
- Counting by ones to 100;
- Read, write, build and represent numbers 11 to 20;
- Number before and after one to 20;
- Number two more than one to 20; and
- Number one less than one to 20.

Number Operations

- Study numbers five, six, seven, eight, nine and ten;
- Introduce "times" as "lots of" using cuisenaire, sets, number line and concrete materials;
- Introduce symbol ( ) for parenthesis; and
- Introduce ½.

Application

- Problems involving +, -, and x concepts;
- Mentals involving combination facts, simple problems, numeration facts and practical number facts;
- Written work such as ½ x 10 = ?; 2 + 3 = 1 + ?; and
- Simple number puzzles.

Sets

- Making equivalent sets;
- Making a set equivalent by + or -; and
- Naming members of sets.

Practical Number

- TIME: Half past, calendar, sesons;
- MONEY: combination of coins to the value of 10c;
- SHAPES: simple patterns and picture using known shapes;
- MASS: Use one Kg and ½ Kg weights;
- CAPACITY: Use one litre and ½ litre measures; and
- LENGTH: Using the metre stick.

WRITING

The children can demonstrate:

- Correct formation in writing own name;
- Correct formation of the lower case of the alphabet;
- Correct placement of letters in relation to guide lines;
- Accurate copying from a master copy;
- Correct spacing between letters and also between words;
- Correct formation of upper case letters;
- Accurate copying of the date; and
- Accurate copying of fluency patterns.

Language: This subject included Spelling and Literature.

Spelling

The children should be able to

- Identify and write the majority of the consonant sounds;
- Identify and write the vowels;
- Identify and write the blends sh, th, ch;
- Write the common nouns, verbs and other words used in Sentence Maker;
- Write first name from memory;
- Complete a dictated sentence;
- Add rhyming words to a word given; and
- Identify two letters blending together to form a single sound.

Literature

The children should have

- Read a wide range of books;
- Had a wide range of books read to them;
- Had a wide range of poetry read to them;
- Developed the ability to listen attentively;
- Developed the ability to evaluate whether a story is fact or fiction; and
- Been introduced to a wide variety of written language.

Since the Project had, as one of its objectives, the extension of children's creative abilities, the Behaviourist Program provided the opportunity for children to participate in creative activities. The Program had a number of specific goals behind these activities. These were:

- To gain practice in the use of various items of equipment such as scissors;
- To explore what can be created with given materials;
- To co-operate in the production of whole class based projects;
- To learn to share equipment, time and ideas with other peer members;
- To interact with other adults other than the teacher;
- To learn the importance of time allocation in relation to tasks to be completed;
- To move from one task to another without adult guidance and supervision;
- To choose and carry out a selection of tasks; and
- To gain experience in the use of a wide variety of materials.

This completes the Year One objectives. The relevance of a Behaviourist Program which stressed the academic skills to the needs of 'disadvantaged' children, such as those at Mt Druitt, is now discussed.

APPENDIX B

DEFINITIONS FOR USE IN OBSERVATIONS

Behaviour	*Definition*
On-Task	*A child is working on or looking at his materials is in contact with the teacher and is not disturbing another child.*
Off-Task Contact	*Teacher contact is made to a child who is not working or looking at his materials or is disturbing another child.*
On-Task Contact	*Teacher contacts a child while he is working on or looking at his materials, is not disturbing another child, or is sitting quietly waiting for the teacher's contact.*
Prompt	*A verbal request from the teacher for a specific response: "Read this sentence," or "Write this letter."*
General Praise	*Teacher approval which does not specifically state what behaviour is being praised, for example, "That's nice", "Good", "Fine".*
Descriptive Praise	*Teacher approval which names the response being approved, for example,"You're a good boy for putting the blocks away", "That's a lovely painting."*
Question:	*Teacher discusses a specific task or subject, for example, "First of all I paste the back of the picture, then I press it on to the paper and smooth out the wrinkles, etc."*
Disapproval	*Teacher tells a child he is wrong by use of a negative statement such as "That is wrong". "That's not correct". Or the teacher requests that the child change an inappropriate activity with statements like, "Sit down," "Turn around", or "Get back to work". Perhaps the most commonly used disapproving comment is "Shhhh!"*

APPENDIX B Instructional Teaching Criteria Observation Form.

Date: _____ Teacher: _____ Observer: _____

1. ON-TASK OBSERVATION

Time Began _____ Time Ended _____ Total Time _____

Number of Children in Group _____

Minutes: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____

6 _____ 7 _____ 8 _____ 9 _____ 10 _____

Percent On-Task = $\frac{\text{Number of children On-Task}}{\text{Number of children in group x 10}}$ = _____

2. TEACHING OBSERVATION

Time Began _____ Time Ended _____ Total Time _____

Contacts

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
On-Task Contact																														
Off-Task Contact																														
Prompt																														
General Praise																														
Descriptive Praise																														
Question																														
Discussion																														
Disapproval																														

3. SUMMARY - INSTRUCTIONAL TEACHING CRITERIA

80% Children On-Task	Yes	No
100% On-Task Contacts	Yes	No
100% Contacts contain Praise	Yes	No
90% Contacts with Prompts also contain descriptive Praise	Yes	No
0% Disapprovals	Yes	No
Time-out (if used) is used approximately	Yes	No

APPENDIX C

EXAMPLES OF WEEKLY PLANNING

YR.1 - WEEK 6 TERM 2

Number:

Numeration and Counting -

- odd and even numbers to 20
- recognition of Nos. 1-50
- counting backwards from 30-1

Operations:

Continue missing addend.

Complete the sum 3 + ☐ = ☐ 7 - ☐ = ☐

10 + ☐ = ☐ 8 - ☐ = ☐

Number lines: two addends

2 + 2 + 1 = ☐

Practical:

Introduce ½ using shapes.

Spelling:

en: hen, ten, men, pen, den, Ben.

went, then, when sight word

are, put

continue ch

Writing

Nn - concentrate on height.

Nanna is nice - sample sentence.

fluency pattern.

Reading:

Dolch words drilled.

Opposites

Match word with its partner using a capital letter - Baby, baby.

Say and read the alphabet.

* * * * *

YR. 1 - WEEK 7 TERM 2

Number: Numeration and Counting: Revision

- rote counting by 2's: odds, evens
- sequence of 4
- check for reversals 10 - 30
- revise number between
  " number larger/smaller
- ordinals up to 10th - given a position in a series, find person or object.

Operations: Revision -

continue missing addends - 2 + =

5 - =

continue number line with 2 addends

missing sign - 2 1 = 3

4 2 = 2

Practical: Revision of 1/2, 1/4

clock work.

Spelling: Revision of word groups -

oy og it um ag en

ch sh oo

Introduce ar

car far bar jar star cart

dart farm harm shark park.

Writing: W w - concentrate on width

pattern

date.

Reading: Revision - of reading words)
- of spelling words) read and draw using these words
- of Dolch words)

92

Revise double sounds - sh ay e oo ch

Punctuation - rewrite story with full stop,

question mark and capitals

my mum is sick

are you going to the park

Make lists of words with certain classification:

e.g. all words have 4 sounds

all words have "e"

all words start with "sh"

* * * * *

APPENDIX D

MACQUARIE UNIVERSITY

MT. DRUITT EARLY CHILDHOOD PROJECT

Inservice Morning - 30/5/79

EVALUATION OVERVIEW - Where are we up to??

1. PROSE (Personal Record of School Experiences) is a method for systematically recording what teachers and pupils are doing during a set period of time. Children are observed one at a time and the observer notes:-

- who the child is with (teacher, aide, another child, by himself)
- what the child is doing, and
- how he is doing it.

These observations will be made during a two week period commencing Monday, 16th July.

2. TLI (Teacher Language Instrument) is a method for systematically recording and analysing patterns of teacher speech in terms of mode and function. Each program reflects a different method of teaching and it is expected that these differences will be apparent in what teachers say. It is impossible for observers to record their observations quickly enough on the spot, so a videotape is made in each classroom, and is later replayed as often as necessary until all the required information has been recorded. These videotape recordings will be made during a two week period commencing Monday 2nd July.

Analysis of the data obtained using the above two instruments will provide evidence as to whether or not the programs have been implemented as intended. When PROSE was used in 1977 in the pre-school classes the results showed that the programs differed from each other as expected and were being implemented as intended, eg. the Contemporary Australian program had a lower proportion of child/adult interaction than the other programs. This was to be expected because children selected the activities they wished to become involved in and teacher structuring of activities should have been minimal. Children in the competency program engaged in proportionately more school related tasks than did children in the other programs. This was also in accord with the stated intentions of this program.

3. It will be necessary to test all the children in September on a number of different aspects of achievement. Disruption of normal classroom activities will be minimised by withdrawing 2 or 3 children at a time for testing during a three week period. The tests will be in the areas of language, maths, reading and general development.

Similar testing at the beginning of 1978 (when the children were commencing kindergarten) showed that there were highly significant differences between pre-schoolers and non-preschoolers on all measures. Testing at the end of 1978 showed that preschoolers were still performing at a higher level than non-preschoolers but the differences were less significant than they had been at the beginning of the year. The children in the Contemporary Program performed slightly better than children in the other programs (there were no differences amongst the other 4).

Comparison of the programs in terms of pupil performance on achievement tests is seen to be a useful activity, not so much because it is anticipated that any one program will prove "superior", but rather to indicate that a variety of different approaches (amongst which teachers can select according to personal preferences) will all result in similar levels of general achievement. Each, however, will produce specific effects in certain aspects of learning.

MT. DRUITT EARLY CHILDHOOD PROJECT

1978

A BEHAVIOURIST EARLY EDUCATION PROGRAM

WHALAN INFANTS' SCHOOL
MACQUARIE UNIVERSITY

THE PROJECT

The Whalan Infants' School has chosen to implement a Behaviourist program in Kindergartens 1 (Mrs Townsend) and 2 (Miss Booth). The N.S.W. Department of Education has approved and supported the scheme and Macquarie University, through a grant from the Bernard van Leer Foundation, is studying all aspects of the program. The findings of these studies will be reported and made available to parents.

Because the program is new you probably will be keen to know more about it. This paper is one way to find out about the program. A better way is for you to come into the room and work with the children and the teachers. In this way you will be able to make judgements about it for yourself. In participating, parents and teachers can plan and work together with understanding to achieve those goals we share for our children.

THE PROGRAM

The Behaviourist Program concentrates on behaviours and its goals aim at something that can be observed. By doing this teachers can easily tell which children need assistance.

Each step is taught at an individual pace. Once the children master a certain task they progress to the next level of difficulty.

The school is viewed as offering a variety of experiences but in this particular program reading, writing and number are stressed. Also, the program aims to eliminate negative teacher behaviours and replace these with positive strategies.

Most Behaviourist programs seek the elimination of all harsh punishment from their classrooms. One technique, provided it is applied consistently, is to ignore unwanted behaviour while giving immediate praise and attention for its desirable opposite. The teachers rely entirely on the rewarding value of adult approval and praise. Two experts on the program say:

> "Teacher attention in the form of a pat on the back, a hug, a smile, or a word of encouragement can be one of a teacher's most useful tools. By systematically using such teacher attention, the frequencies of a great variety of problem behaviours in pre-school and elementary school children have been successfully reduced. Fortunately, most teachers find the systematic use of praise natural and uncomplicated, and since teacher attention can be used to decrease a wide range of problem behaviours and to increase many appropriate behaviours, teachers should first attempt to handle most problems with teacher attention."
>
> (O'Leary, K. D., & O'Leary, S. G., Classroom Management, 1972, p.87)

There are some behaviours, however, which the teachers consider cannot be ignored. Rules are placed on behaviours that might injure other children or damage property. At the beginning of first term these rules were introduced and emphasized. Any breaking of these rules leads to a technique called "Time-out".

For an example of Time-out consider the problem of two boys fighting. The teacher stops the fighting and explains that by fighting the two boys might hurt each other and then everyone will be unhappy. The boys are then seated apart and away from the other children. After a set time, say three minutes, the teacher tells the children they may return to the group and the incident is over.

The first step in the Behaviourist program is to describe the final goals in terms of behaviours. Goals need to be something that the children do; not what they 'feel', 'appreciate', 'understand' or are 'aware of'.

The teachers, through their training and experience, have already set the goals they expect the children to master by the end of kindergarten. Of special interest are the subjects reading, writing and number. When planning the teachers divide the goals into segments, in order of difficulty, usually a term in length. These term segments are then divided into weekly segments.

At the time of writing (April) there were 55 children in the two kindergartens. All these children could recognize the shapes 'circle', 'square' and 'triangle', while only one child could not identify an oblong. 54 children could identify the colours red, yellow and blue. 50 children can now recognize their names while 54 children can identify the words 'mum' and 'dad'. 48 children can identify the word 'big' and 49 can recognize 'little'. The next words to be introduced are 'boy', 'girl', 'cat', 'dog' and 'is'.

PARENTS

Parents are invited to share in three different ways. First, there is the level of material preparation. Already, many parents have taken ideas home and made word games, number games, and outfits for the children. Things like an old hat, a nurse's uniform or a hand puppet are very useful for stimulating language in the children.

Second, there is the level of interaction with the children in the classroom. Parents are particularly needed to reduce the size of the groups. Supervision is important in checking children when they first begin writing, making sure they start at the right point, or that they move their pencils in the right direction. The teachers have set up a number of different activity levels that need adults at hand. What would be helpful is a parent to take a small group for 'cooking'.

At the moment, parents are welcomed between 11.30 to 12.30 Tuesday to Friday.

Third, there is the level of policy. We need to work together to decide which goals are important for our children. These goals need to be discussed and remain open to review.

We are working to develop this program and hope that you might help us. Your interest and participation and evaluation are crucial in this development.

We would like to thank the many parents that have already participated in the program.